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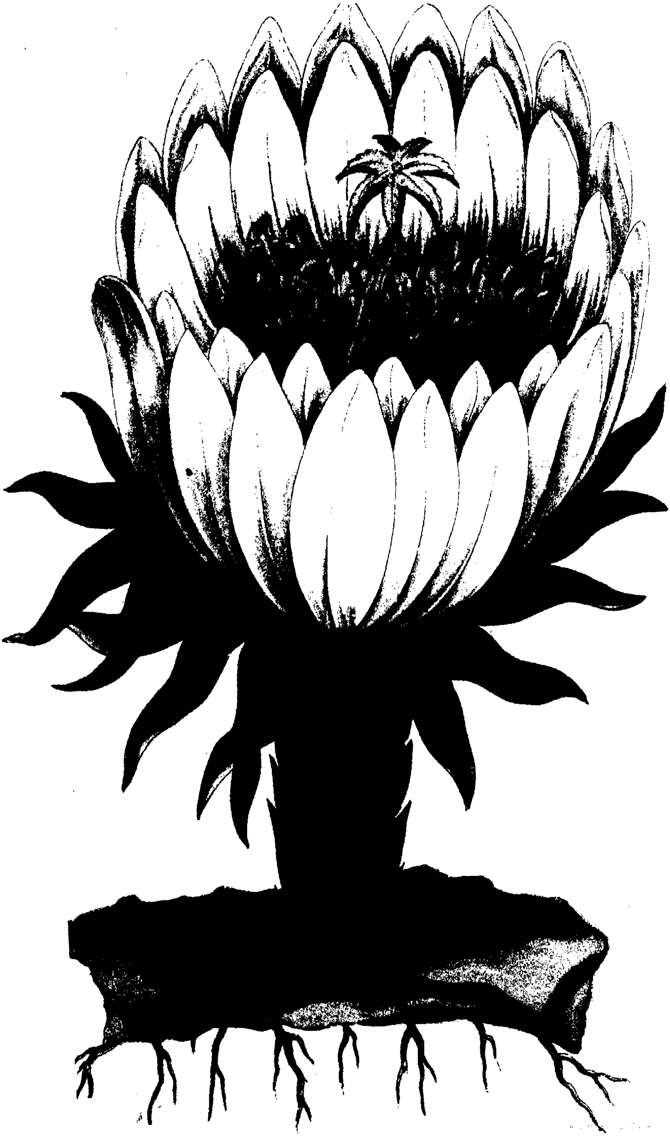
PREFACE.

On completing and presenting to its numerous readers and the public generally, the Second Volume of The Florist's Journal, we find ourselves entitled to congratulate both them and us. We laid down an original and definite plan for ourselves on the first commencement of our labours;—this plan was not to give a mere list of flowers from the catalogue, and a tame and empirical account of every one's mode of culture, unsupported by general reasonings, and those appeals to the grand workings of nature, for which the works of our predecessors might be examined in vain, as they contented themselves with the old packhorse ways of the science. We, on the other hand, have endeavoured to advance equally the art of floriculture and the science of plants, and the result, though we dared scarcely hope for it at the beginning, has been most successful. The style of writing which our correspondents have adopted is an unprecedented one; for, instead of confining themselves to composts, manures, and empirical modes of treatment, they have, without neglecting these practical matters, brought philosophy to bear upon the subject, in a manner far superior to any thing known in the earlier botanical journals of Britain. Such papers can be furnished only by the ablest men of the practical class,—by men who have brought a sound and searching philosophy to bear on their delightful art. The number of these, interested in our Journal and connected with it, continues to increase rapidly every day; and we speak as we have actually experienced, when we stated that our Journal, few as are its monthly pages, has called forth the foremost names in the field of floriculture, and enabled that field to view itself in a new manner, in which it will appear as much the handmaid of science as the superintendent of art: and the spirit of these men will be caught up and delighted in by other readers, until floriculture shall become as expanding to the mind, and warming to the finer feelings, as its practical results are delightful to the eye. In every flower there is, as it were, a divinity; and by means such as those which we have mentioned, and take some credit to ourselves for bringing forward, this divinity is induced to hold with mortals that delightful converse, which raises man from the earth, and points his faith and his hope to those regions, the flowers of which know no winter.



CEREUS TRIANGULARIS.

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JANUARY 1, 1841.

CEREUS TRIANGULARIS.

AT page 157 of our first volume, we noticed the blooming of this most splendid flower, in the conservatory of W. M. Christy, Esq.; and we there stated that to be the first time of its flowering in this country. In this we were partly wrong, and partly right. Wrong, in so far as that the plant had flowered before; and right, in so far as that the former flowers, instead of being splendid, were so insignificant that even those in charge paid no attention to them, and the rest of the world were in ignorance of the fact. It flowered in the Kew Gardens, and also in those of the Horticultural Society; but so insignificant was its bloom, that when the director of the latter gardens saw Mr. Christy's, even before it had expanded, he was of opinion that it was a new species. In this, there is a useful lesson,—not to us, for we cannot be expected to hunt out every flower which the parties themselves neglect,—but a lesson of a more valuable kind; a very palpable hint to the cultivator, never to come to a positive and ultimate conclusion as to the beauty of a flower, until he has hit upon [illegible] very best way of flowering it. This is not so easy a matter [illegible] one may be apt to suppose. For the modes of treating a plant are numerous, almost to indefinitude, and of this number there is *only* one which is the best. This, we believe, is to a very great extent indeterminate; and must, in a great measure, be arrived at by trial and error. [On the importance and mode of conducting which "trial and error," we intend, some day, to offer a few remarks.] Nature is only a partial guide in this; for the purpose of nature is not to produce beautiful flowers, but fertile ones. We know of no established relation between beauty and fertility,—only we know that when, by artificial treatment, we increase the beauty of a flower, we always, in nearly the same ratio, diminish the fertility. Having said this, we shall proceed to describe Cereus Triangularis; and for the substance of the description, we are indebted to our talented and indefatigable friend, Mr. Don, than whom a more efficient priest does not minister in the temple of Flora.

CEREUS TRIANGULARIS belongs to the Linnæan order *Icosandria*, and to the order *Cacteæ* in what is called the "Natural System." It is one of the night flowerers, and superior both in the colour and size to the *Grandiflora*, the blooming of which is made an exhibition; while this one, owing of course to unskilful treatment, has been passed over with neglect. We do not pretend to say that the flower from which our figure was taken, was the finest that the plant could produce; but it was, beyond all comparison, finer than those produced at Kew and the Horticultural Gardens. Our figure is not much more than one-fourth of the lineal dimensions of the flower, and consequently not much more than one sixty-fourth of the volume estimated as a solid.

The length of the flower was fully a foot from the base of the tube to the lips of the petals; and the diameter of the expansion of the inner petals was fully ten inches. When viewed laterally the general colour is greenish white. The scales, or bracteæ, on the tube, are pale green; the sepals, of which there are several rows, are greenish white, with a slight tinge of yellow; and the petals, which are ovate-lanceolate, and very numerous, are of the most delicate semi-transparent white: the stamens, which are countless, incurved upon the pistil, and filling the tube, are like silken threads of the most delicate lemon yellow, which deepens where they are crowded on the narrow part of the tubes, but softens off toward the anthers. These are of a rich yellowish brown, kidney-shaped, with the length across the filaments; and they, from the delicacy of the latter, float over them like little bees with invisible wings. The pistil is yellowish, with a shade of green and brown, and it is stout and fleshy, and stands like a queen amid the slender filaments, and the nodding anthers. Then,

> -"what seems its head,
> The likeness of a *queenly* crown has on;"

for the stigma is divided into a number of crenulated lobes, which have no inconsiderable resemblance to a coronet. The whole flower is beautifully grand, without any thing gaudy to spoil the effect of these more delightful qualities; and during the short time that it would naturally remain expanded on the plant, the scent, though not strong, is very sweet. What the flower may yet be made by treatment superior to what it has hitherto generally received, no one can say; but of the specimen we have figured, we may say that there is not an equal to it in simple beauty in the whole of its tribe—or a superior in any tribe.

The plant which bears this fine flower is of vigorous growth, but of very straggling, and even bizarre habit. The stems, or fronds, are triangular, or have three projecting ridges; and one of the spaces between them is flatter than the other two, and puts out rootlets when near a support. The plant is leafless, unless the scales that appear on the joints and buds are to be considered as such; the flowers come out from the fleshy parts of the fronds; but never, we believe, from that side which has the habit of producing rootlets. The thick and fleshy parts of them are connected by scaly, cylindrical, and fleshy joints, not so thick in general as an ordinary quill, and all the portions between these will root, and become new plants. The roots are even more rambling than the stems, and if neglected, will run in crevices for a number of yards.

Plants of this tribe are generally looked upon as dry stove ones, and treated accordingly; but we think the opinion unfounded, and the treatment unwise. Like most other plants, they require a season of rest and a season of growth. When growing, they require a good supply of water, and also a strong heat, to make them grow vigorously. For the most part they are tropical plants, and therefore justice is not done to them, unless they have tropical treatment. But a system has been got into, no one can very well tell why, of growing them with cool dry treatment, or in the hot-houses, without any moisture; and as this system has been adopted, it must, right or wrong, be followed by those who are content with being servile imitators of others, and never trouble their heads about "whys and wherefores."

From the improper treatment they receive, these plants make but feeble efforts in growth, and still more so in flowering. The unthinking and "mill-horse"-emulating cultivator, thus first spoils his plant; and then despises it, and does what in him lies to make all the world do the same. But, if these plants were grown in a strong moist heat during the summer, and then allowed to be perfectly dry in the winter, and kept in a temperature of from 55 to 65 degrees, there is not the least doubt that they would flower splendidly every season; instead of producing one or two poor and stunted flowers once in five or six years, as they do under the general treatment they now meet with.

For the most part, and in the case of the smaller ones especially, they are found growing among the rocks, and in very warm situations. But the larger ones are found among trees, on the plains, in situations where they are literally deluged with water during the rains; and the smaller ones among the rocks have also a very copious supply of water at the same time. These natural circumstances do not lead us to all the details of the artificial treatment; but they are our best, and indeed our only guides to the principles.

In order to grow *Cereus triangularis* successfully, it should be potted in turfy peat, leaf mould, well-rotted manure, and sand, in equal portions. A proper drainage should be ensured, by large potsherds, in the bottom of the pot; and large pieces of turfy peat should be laid over them to prevent the compost from being washed down, and choking up the drainage. The size of the pot must, of course, be regulated by that of the plant. When the plant is potted, it may be trained on stakes, or against a wall, or supported in any way that the grower may prefer; but its habit is such that it always requires support of some kind or other.

In the summer, which is the proper season of growth, the plant should have a copious supply of water, and a heat of from 70 to 90 degrees, or rather more during the day; but the temperature should be allowed to get lower during the night, that is, no artificial heat should then be applied, except in the early part of the season, and also the latter part of it. The season of growth should be continued from April to October.

When our friend, Mr. Crichton—to whom the floricultural world is immediately indebted for the knowledge of how much beauty this flower can be made to display—first entered upon the charge of Mr. Christy's houses and grounds, he found that this plant had been totally neglected; that is, it had got no water for a great length of time; and thus the principle of vegetable life in it was reduced to the most feeble state imaginable. He therefore commenced giving it a plentiful supply of water, and a strong heat at the same time. The result was, that it soon began to show signs of flowering; and produced two most splendid flowers—so splendid indeed, and so different from anything which even the men of most pretence had before known as produced in this country—or any where else, that it completely outwitted the Professor of Botany in the London University, so far, that he assured Mr. Christy that the plant was a new species.

This is a *new* discovery in the case of an *old* plant, certainly; but it is one of much interest and usefulness; and it ought to teach professional botanists, as well professors as others, the urgent necessity of making themselves well acquainted with the principles of the philosophy of floriculture.

OFFICE AND REMUNERATION OF GARDENERS.

In our first volume we said, or afforded an arena to those more competent to say, a good deal about flowers; and we hope that, in the present and succeeding ones, we shall be enabled to say more, and procure more to be said, and as much better said as possible. We trust, however, that we have already advanced enough, and advanced it on grounds too firmly established for being shaken, to show to every one, who has ears to hear and understanding to comprehend, that the successful culture of flowers is a pursuit that requires talents, acquirements, zeal, and perseverance, of no ordinary character, and far higher than those necessary for persons in the menial and mechanical departments of society, how highly soever these may be esteemed, and how largely soever they may be rewarded.

Having said thus much respecting flowers, and having established the justice of that admiration of them,—which is already pretty general, but which we would wish to see increased and warmed, by making a selection of some of the choicest beauties, and presenting them to our readers delineated in their natural forms, limned as nearly as possible in their natural colours, and accompanied by descriptions expressed in all the simplicity of truth;—having done this, we think it is high time that we should speak a few words respecting those to whose skill and attention we are more immediately indebted for those beauties, and the pure, exquisite, softening, and refining pleasure, which we derive from the contemplation of them. It behoves us to hold the balance of justice as evenly poised as we can; and therefore, while we enjoy the gift, and call upon a willing world to participate with us in the enjoyment, we must not forget the giver.

We have elsewhere endeavoured, in part at least, to show the beneficial effects which the love, the study, and the cultivation and improvement of flowers and ornamental plants, have already had, and are calculated still further to have, upon the minds and morals of all ranks and classes in society; and we hesitate not to say, for we know we could prove, that, in the present state of the country, an indifference to flowers is one of the most unequivocal proofs of a rude and semi-barbaric mind. In less intellectual states of society, keen observers have asserted, and that with no small degree of apparent truth, that upon the great mass of the people, music has more influence than moral harangues, and ballads more than legislative enactments. This may be the case, in the first attempts to elevate mankind from the grossness of low sensuality. But these matters go only a very little way; and they cannot, in the very nature of things, go far. For, though the gratification which they afford is refined, and certainly superior to that of those merely animal appetites which the brutes possess and enjoy in an equal degree with ourselves, and often in a higher; yet still, refined as these may be, they are only sensual,—they excite no train of thought, they lead to no knowledge, they leave nothing upon which the mind can riot in activity and delight, after the music has ceased, and the ballad is at an end. It is an old and a true saying, of "the song of one who hath a pleasant voice, or of one who playeth skilfully upon an instrument," that, after hearing the sound, men go forth, and "straightway it is forgotten." There is nothing mental in it; and therefore it cannot satisfy the enlightened mind. This, by the way, is the reason why the theatres have been nearly abandoned by all save the vulgar and the profligate; and nothing can restore them to the rank which they once held, but a revulsion of society backward to a state more allied to semi-barbarism. They complain that there is a want of talent; but the country never possessed more, nor was it ever so rapidly on the increase. But the drama has now no attraction for it, except in the case of some "stricken" enthusiast; and to hear him ranting in high heroics to St. Giles's and the saloons, puts one, not unpleasingly, in mind of the poet in Peregrine Pickle, cooking a dinner "after the manner of the ancients" for the refection of modern *gourmis.*

It has fared much the same with the other matters which are intended, or supposed to find, occupation for the idle mind, and relaxation for the busy. They who now write to amuse the multitude, seek to do it by delineating the lowest characters, and dwelling upon the plague-spots of common society; and the "fashionable ephemera" have no charms except for such as are parties in the heartless intrigues of the gay, or longing to become so. No doubt the coarseness of the Smolletts and Fieldings has gone—as well as the nature and truth. This is a change certainly; but it is not an improvement: the poison has gone inward:—it was in the expression, it is now in the idea—where it is far more insidious and dangerous than it was when applied only externally.

But notwithstanding that these matters have ceased to have any attraction for people of purity and refinement, the mind must still have its relaxation, just as the body must have its rest. Whether the active occupation is business, or study, or public or domestic management, the mind cannot be always occupied with it, otherwise the performance would soon deteriorate, or the mind would be speedily worn out; and this would take place sooner in proportion as the occupation had more of routine and uniformity. In such cases the pleasures of the table are a dangerous relief, and the displays and courtesies of society at best but a doubtful one. They have this further in them: they require health, which they have no tendency to preserve; and they are incompatible with that solitude which, at due times, and not indulged in to excess, is the luxury of the enlightened mind—the state in which one enjoys that kingdom which is in one's self, and cannot be invaded by the world.

This relaxation, so necessary and profitable for all, is most essential to females who are so situated as not to require the labour of their hands, or the thought of providing for themselves or others; and if such females have not some simple and constantly accessible source of intellectual occupation, they are in danger of falling into inanity or frivolity of some kind, and thus becoming a wearisomeness to themselves—and to others.

Now, after long and attentive consideration of the subject, and carefully weighing the value of all relaxations which have in them something mental, and refreshing, and invigorating to the mind, we have been led to the conclusion, that gardens and flowers are, in the present state of society, the very best subjects for this purpose. They can be had and enjoyed by persons in every rank of society, in the exact ratio of their ability; they can be enjoyed alone or in company, in the open air or under cover, in health or in sickness; and if the mind is duly trained and instructed, they can suggest innumerable trains of thought and knowledge which, like the plants themselves, increase and become more delightful as they are longer continued. They can, in fact, be read as a book, and not as a book composed by man, but as written by the finger of the great Maker of flowers. Is the mind harassed by the cares of business, worn out by study, stupified by dull company, fatigued by lively, or smouldered in the listlessness of its own inactivity?—take a walk in the garden, or a lounge in the conservatory, and in brief space its tone and elasticity will return, and all will be well for grappling anew with the world.

We have dwelt thus somewhat at length upon the intellectual value and pleasure of gardens and flowers, from a conviction that, though this is not only their highest value, but the one which is most frequently felt, it is the one which is least written about, or otherwise mentioned. Like all purely intellectual pleasures, the enjoyment of it is satisfaction enough; and therefore it makes little noise in the world, and never calls the sounding of the trumpet to its aid.

But, besides this, the pleasures and enjoyments of the garden are so numerous and varied, that, be the state of any one what it may, this must be considered as the foremost and most pleasurable part of the whole establishment. When, after the family of a citizen have lived for some time in their suburban villa, with its little patch of ground, its comfortable walks, its neat beds and borders, its shrubs, and all the little *et cetera* of even the humblest horticulture,—circumstances require them to return to the city, the grand privation which they—the females and young people especially—deplore, is the want of the garden. The house may be more convenient, the apartments more spacious, the furniture more costly, the viands more choice, and the company may be more numerous, frequent, and agreeable; but—*there is no garden!*

As we ascend higher in the ranks of society, and there are larger sums to expend upon pleasurable subjects, and more leisure for the enjoyment of them, the garden rises in importance, in a higher ratio, perhaps, than the means of procuring and enjoying it. Even the vegetables and the fruits which a gentleman gets from his own garden, are superior to any that he can purchase for money if he has the wealth of Crœsus. He has them when he wishes, and in the best condition—as they are not steamed and fermented on their carriage to market, or on the store of the dealer. Besides this, he has them, or, if he employs a proper gardener, he may have them, of superior quality to any that he could purchase. Those who grow fruits and vegetables for sale, do not work for real quality, but for quantity and appearance to the eye; and the obtaining of a high degree of these is very generally accompanied by a deterioration of that which forms the chief excellence of the fruit or the vegetable. The strongest-growing and the most abundantly-producing sorts are chosen; and they are so forced with rank manures, that what comes to market, fine as it may appear to the eye, is fungous and tasteless, and not always wholesome. The gardener to a private family has no inducement to this, because his object is not pecuniary profit, but superior quality. Therefore, he selects the best sorts, and manages them in such a manner as to send the produce to table in the full perfection of its flavour and wholesomeness.

In this, and indeed in every department of his varied office, the gardener has a duty to perform, of a higher order than what is required from any other of the establishment. The butler is expected to put good wine on the table, but he has nothing to do with the making of it. So, also, the cook is expected to send up good meat well dressed; but he does not breed beeves or sheep,—and if he was called upon to begin his culinary occupations at the comparatively advanced stage recommended by Mrs. Glasse, "first catch your hare," the family would have to wait long for dinner.

Were we to run over the list of the whole establishment, we should find all the members of it in the same predicament, except the gardener. There are different ranks of them,—as there are different degrees in the peerage; but, just as the peers are all nobles, even so are they all menials. The housekeeper may look with scorn upon the scullion, as the steward with disdain upon the stable-boy; but they all agree in the main,—they are to obey the orders of a master or mistress, and in the promptitude and perfection of this obedience, the whole of their official merit consists. Officially, they have no minds of their own, and not the slightest use for learning or science. It is desirable indeed that the greater part of them should be able to read and write, and even understand a little simple arithmetic; but beyond these they have no necessity to go; and even a steward may do all that is officially required of him with nothing more than a National School education.

From this it must not be inferred that we have the smallest intention to undervalue the office or labour of any one of these parties. On the contrary, we readily admit both the necessity and the value of them. The merit is not in the office, but in the performance of its duties; and in this, the humblest menial may, in his way, be as meritorious as the highest peer. But while we readily admit this, we must claim and maintain the right of inquiry into the relative duties and importance of officers, because that is an abstract principle, and has nothing to do with the merits or the demerits of individuals.

Now, in so far as a gardener is a servant, hired, employed, and paid by a master, he is as much a menial—an obeyer of orders given, as any other of the establishment; and if the orders of his master could reach and regulate every thing he has to do, he would be as completely a menial as the rest. But this cannot, in the very nature of things, be the case; or, if it were, the man would be no longer a gardener: he would be a gardener's labourer, and his master would be the gardener. Few men, able to keep a garden and have it properly attended to, have leisure and inclination to be their own gardeners, and we believe still fewer have ability. Therefore, in the great majority of cases, he who is a gardener in name must also be one in reality—must have a head for garden management, as well as hands for garden tools.

This elevates him above the merely menial part of the establishment, by blending the independent man who must follow his own system, with the mere menial who has nothing to do but obey the dictates of his master. He has other orders to obey—the orders of nature; and these are numerous and varied, and in many cases complicated and obscure.

Therefore, the gardener must qualify himself for the duties of this higher and more important office. In the first place, the gardener ought to know something of Latin and Greek,—not that this will enable him to grow any plant one jot the better; but he wants it to "breach" the Babel of the names. The lady's maid may also plead that she has to "*par-lies-woo* a-bit;" but English-French will do for this, and it may be picked up anywhere.

In the second place, the gardener should be thoroughly acquainted with the nature and habits of plants, the best modes of treating them, the nature of soils, and their effects upon vegetation, the application of humidity, heat, and light, and the management of shelter and exposure. This is a long catalogue; most of the subjects in it are difficult, and there is no royal road to them. The gardener must therefore be an observer, and must have been so before he was fit for entering on the duties of his office; and this requires time, and a library—an expense which has never to be borne by any mere menial. Besides, if the garden is any thing beyond that of the most ordinary tradesman, there will every year be something new and requiring new treatment, so that the gardener must continue his study and expense, otherwise he can neither do justice to his master nor work with satisfaction to himself; and a man who feels that he is so trammelled up as to be unable to do right, is apt, on that very account, to go the more wrong.

Considering all that has been said, and much more might have been said with equal truth, we think we have made it as palpable to reason as any thing can be, that the wages of the gardener should be higher than those of any other man connected with the domestic establishment. But the fact, we fear, is exactly the reverse; and the gardener's wages are not only lower than those of any other man on the establishment, but less than a man can earn by breaking stones on the highways. Is it not monstrous injustice, that a mere butler or footman should get twice or thrice, or a cook ten times as much as a gardener! Such, however—to the shame of somebody, is the fact; and we shall, in a future paper, take some notice of the causes, the consequences, and the probable remedy.

ON THE CULTIVATION OF DENDROBIUM.

BY MR. P. N. DON.

THIS, though far, very far from a natural genus, is still a very interesting and beautiful one. The habits of some of these species differ much ; and their flowers are so various in their forms, that no person could believe that they belonged to the same genus. In fact, it speaks little for the botanical acumen of the orchideous botanist, when he can unite plants of such dissimilar habits together. I consider it one of the greatest points of beauty in the formation of genera, that they can at once be recognised without the necessity of examining those minute parts, the pollen masses. In truth, the greater portion of orchideous genera are a mass of confusion, as far as regards their generic construction ; and their cultivation is as ill understood, as far as regards the flowering of them. In Dendrobium, we seldom see a number of species in flower at one time ; and when we do, we seldom see them flowered to perfection ; they are usually to be seen with only one, two, or three flowers on a plant, which can give no idea of their beauty. We have often seen very large plants of Dendrobium, and also of other genera, that never had flowered, and yet were growing in a healthy and vigorous state. The cause of this is, that the plant has been always kept in an excited state, and never had any rest ; so that it could never ripen its wood, or pseudo bulbs, and prepare for flowering. Instead of being a growing and flowering plant, it was made entirely a growing one. Its habits thus being altogether changed, the plant continued to grow on, and never prepared for flowering. When Dendrobiums flower, it is not that their habits are well understood, it is because the plant is able to flower under any circumstances ; but many of the most beautiful, and at the same time the most delicate, seldom or never flower ; and when they do, it is only with one or two flowers. But if they were properly treated, they would flower in the greatest splendour. Many persons fancy that, if they can grow their plants, that is quite enough, without flowering them. They also think that, if they keep their plants always in a healthy growing state, they will be sure to flower : but this is not natural, for nature has not placed those plants in situations where they could always be growing ; it has placed them in situations where, at one season of the year, they can and do have abundance of moisture, and at another season are entirely dry; and many of this species lose their leaves, and then the pseudo bulbs being perfectly mature, they are then ready to burst forth into splendid flower, as soon as the rainy season returns, and also into fine growth. All the species of this genus do not flower at the beginning of the rainy season; for many of them flower at the termination of it, and some few species take their rest when flowering, and commence growing soon after the flowering is over. This shows the necessity of having two houses, so that those plants that require a short rest, should not be intermixed with those that require a long one.

The best time to pot Dendrobium, is at the beginning of the growing season; namely, after they have flowered, (that is, those plants that are in a flowering state;) but they should all be potted at the beginning of the growing season, if they require potting. They should either be put into large pots or baskets; but I should recommend baskets for the greater portion of them, as the plants grow so much finer, and also have a more natural appearance. The baskets should have a wire bow, so that they can be suspended from hooks or rods run along the hottest end of the house, as the plants, when in a growing state, require strong heat and abundance of moisture. They should either be potted or basketed in the following compost: equal portions of turfy peat, *sphagnum*, (bog-moss,) cut in small pieces, and well mixed together. If intended to be grown in pots, these should be filled up to about one-half with large potsherds; and over the potsherds should be placed a little uncut sphagnum, so as to prevent the smaller portions of the compost from getting through amongst the potsherds. The baskets will require a few large potsherds laid neatly along the bottom, and it would be well, if a few were "stood up" in the basket. Over that should be laid the uncut bog-moss; then the basket or pot should be filled up with the before-mentioned compost; and it should be pressed firmly down, so that the plant may not sink when it is potted and finished off. The base of the plant should be two inches above the rim, either in the basket or pot. All along the sides, the baskets should be filled up with the uncut sphagnum, so as to prevent the smaller portions from coming through, which otherwise would be the case when they were watered. The baskets or pots should be proportioned to the size of the plants. When I say that the baskets should be proportioned to the size of the plants, I know that many persons get such small specimens, that it would be ridiculous to place them in large pots or baskets; but when these plants have got to a good size, the best plan is to place them in large pots or baskets, as I have recommended for other genera. When these plants are in a state of vigorous growth, they should have abundance of water, and they should also be syringed every evening, as long as they are in this state of growth; and, as soon as they begin to show signs of getting towards the completing of their growth, water should be sparingly given, till at last it is withheld altogether. As soon as they have completed their pseudo bulbs, and these have a firm appearance, they should be removed out of the growing house, and placed in the cool and dry resting house. They there should remain, till such time as they show signs of flowering, or of growth; and then they should be removed back into the growing house, and have the same treatment as before. Even small plants are better for being rested; because they push forth with greater vigour than if they were always in an excited state. This alternate application of drought and moisture, is, I am certain, the proper mode of treatment for this tribe of plants, although many persons are of a different opinion; but those persons have never succeeded in flowering their plants to perfection, therefore I consider them but ill judges of the best mode of treatment. My reasons for placing the plants, when in a resting state, under cool and dry treatment is, that, by keeping them cool, they are not apt to shrivel, and keeping them dry prevents their damping off. Thus, they rest well, and prepare for flowering, and also for growing with vigour, when the season of growth returns. The mode of treatment which I have recommended is the best, as far as my experience goes; so I shall now enumerate the species as far as I am acquainted with them.

1. *Dendrobium chrysanthum.*—Golden flowered; is a lovely species; the flowers are of a golden yellow, the sepals and petals being of a lighter colour than the lip, which is of a rich mossy golden colour; the stem is pendent, and the leaves alternate, of a light green, lancet-shaped, and pointed. The flowers come out all along the pseudo bulbs; that is, two or three come out opposite each leaf. It very frequently loses its leaves before it flowers, and at other times flowers with its leaves on; but in

either case it is a lovely subject, and deserves well of the lovers of plants. It is a native of Nepaul, and was introduced in 1828. It is best cultivated in a basket, with peat and sphagnum, as recommended. When growing, it requires a strong heat, and plenty of moisture.

2. *Dendrobium calceolaria.*—This is a fine plant, and a beautiful flowerer when properly treated. It requires to be grown in a strong moist heat, till such time as it has completed its stems, or pseudo bulbs ; and when they have finished growing, the plant should be removed into the cool and dry house, till such time as it either begins to grow, or shows flower. When this occurs, it should be removed into the growing house, there to expand its flowers; and when they are expanded, it then should be again taken back into the dry house, till such time its flowering is over. It then should be removed back into its place of growth, and then plenty of water should be given, with a heat of from 70 to 100 degrees. Thus treated, it will grow with the greatest vigour after its long dry rest. The colour of the flowers is yellow ; the sepals and petals being of a paler colour than the lip, which is of a beautiful yellow, and has the appearance of a little pouch. The time of flowering is at the beginning of the growing season, which is in May. It is a native of the East Indies, and was introduced in 1820. This species does well either in a pot or basket, if treated as is recommended. The spikes of flowers proceed out from the top of the pseudo bulb, opposite the leaves.

3. *Dendrobium moschatum.*—This is another beautiful species. The colour of the flowers is a reddish yellow, the lip being somewhat darker than the sepals and petals. The lip has the appearance as if it was covered with a reddish moss, which gives it a very pretty appearance. The flowers of this species are larger than those of the preceding one. This also flowers from near the top of the stem, or pseudo bulb, the spikes bearing from four to twenty flowers on a spike. The stems or pseudo bulbs of this plant as well as the preceding, will, when finely grown, be about from six to ten feet in length ; the leaves are ovate, lancet-shaped, with the stem and leaves of a pale yellow colour, by which it is readily distinguished from the preceding species, which has the stem and leaves of brownish red. The lip has the form of a little pouch, but larger than the other species. A native of Pegu. This is also a pendent species, and does well in a pot or basket. It

also requires a dry and cool rest, when it has done growing. Introduced in 1828.

4. *Dendrobium cupreum.*—Copper coloured. This is so near the last species, that I question whether it is any thing more than a variety of it. The flowers are of a yellowish purple, the stem and leaves are of the same colour as those of Moschatum. A native of the East Indies; introduced in 1835. This requires the same treatment as the others.

5. *Dendrobium macrophyllum.*—Large leaved. This is also a splendid species, and a very rare one. The colour of the flowers is a rosy pink, the sepals and petals being somewhat lighter than the lip, which is of dark rose, intermixed with yellow and white. The flowers are very large, and come out from the joints opposite the leaves, two and three together. When this plant is flowered to perfection, it is one of the most beautiful of the genus. The leaves are alternate on the stem, broadly ovate, and acuminate at the point, and of a glossy green; the stems are pendent. This is best cultivated in a basket, and suspended. It requires the same treatment as the others; that is, plenty of heat and moisture when growing, and cool and dry treatment when done growing. A native of Manilla; introduced in 1836.

6. *Dendrobium Pierardi.*—This is a very neat species: the colour of the flowers, bluish yellow, marked with purple. The leaves are lancet-shaped, and of a pale green colour. The stem, which is pendent, is of a yellowish green. The flowers proceed from opposite the leaves, or rather at the joints opposite the same. It flowers nearly all the way down the stem, and for the most part loses all its leaves before it flowers. When that is the case, the plant is one mass of flowers. It requires to be grown in a basket, and to have the same treatment as that recommended for the other—plenty of moisture and heat when growing, and cool and dry when resting. It flowers at the commencement of the growing season. Native of the East Indies; introduced 1815.

7. *Dendrobium pulchellum.*—This is an elegant species. The sepals and petals are of a light pink, the lip being of a light orange, beautifully fringed. The form of the lip is round, the sepals and petals spreading out, which gives the plant a splendid appearance when in fine flower. The treatment best suited for this is the same as the others. It does best in a basket. It should lose its leaves before it flowers; is a pendent species; flowers at

the beginning of the growing season. Native of the East Indies; introduced in 1830.

8. *Dendrobium fimbriatum.* — A noble species. The flowers are yellow; the sepals and petals of a light yellow, with the lip of a bright golden colour, beautifully fringed. The leaves are linear, lancet-shaped and pointed, alternate on the stems or pseudo bulbs; the stems are pendent; the flower spikes proceed out near the top of the pseudo bulb, opposite the leaves. This does best grown in a basket, and suspended. Flowers at the beginning of the growing season, which is about April. It requires a dry rest when it has completed its growth, and plenty of heat and moisture when growing. A native of the East Indies; introduced in 1818.

9. *Dendrobium Gibsoni* is a very pretty species. The flowers are yellow; the sepals and petals being of a light colour, with the lip bright yellow: the leaves are ovate, lancet-shaped, and pointed. It is a pendent species, and does best in a basket; requires a very dry rest when it has finished its growth, and flowers at the commencement of the growing season. A native of the East Indies; introduced in 1837.

10. *Dendrobium macrostachyum.* — The flowers are white, striped with purple. This species has a very pretty appearance when well flowered. It is a pendent species: the leaves are ovate-pointed, of a greenish purple with the stem; the flowers come out all the way along the stem, opposite the leaves, generally two and three together. This requires a rest when done growing. A native of Ceylon; introduced in 1829. It does best in a basket.

11. *Dendrobium secundum.*—Another beautiful species. The flowers are of a rosy colour; they are small, but they are very numerous on the spike, and the spikes are large when the plant is well grown, and the flowers on the spike all turn one way, which is the reason for the name Secundum; the spikes are pretty many, which gives the plant a fine and handsome appearance. The leaves are broadly ovate at the base, and pointed. This species loses its leaves before it flowers; is a native of Sumatra; requires a rest when done growing. It flowers at various seasons; does well either in a basket or pot; was introduced in 1828.

12. *Dendrobium crumenatum.*—The flowers are whitish, the form is somewhat like a little pouch; the pseudo bulbs are very much branched; and the flowers proceed out from the top of the

branches, somewhat in the form of a spike; the leaves are rigid, ovate, and blunt at the points; flowers at the commencement of the growing season; requires a dry rest when it has completed its growth; does well in a pot or on a log of wood, with sphagnum; *its native country is Java; introduced in 1832.*

13. *Dendrobium moniliforme.*—This is a splendid species. When flowered in perfection, there is not any of the species can surpass this in beauty, if they can even equal it, splendid as many of them are. The flowers are purple; the sepals and petals being of a lilac purple, with the lip of a finer colour, intermixed with white and yellow. They are large, and generally come out two and three at each joint, opposite the leaves. The stem or pseudo bulb is jointed somewhat in the form of a string of beads—hence the name. A native of China; introduced in 1822. This also requires a dry rest when done growing: does well in a pot, as it is an upright growing species. The leaves are of a light glossy green; the pseudo bulb of a yellowish green. The leaves are ovate-lanceolate, somewhat rigid.

14. *Dendrobium nobile.*—This species resembles the last, but is much more robust in its habits. It is a grand species, with dark shining leaves, which are lanceolate and beautifully veined; the pseudo bulbs have a gloss as if they were varnished; the flowers are purple, with the sepals and petals of a more light colour than the lip, which is of a dark purple. This flowers in the same manner as the last, but the flowers are about double the size; it should have a good rest when it has finished growing. By giving this a cool and dry rest, it will flower to perfection, which it has not done yet; the reason of this is, that the plant has all along been kept in a growing heat, so that it never had any rest to make it flower. This does well in a pot or basket, as I have recommended. A native of the East Indies; introduced in 1837.

15. *Dendrobium cærulescens* is another noble species, with the flowers of a bluish purple, the sepals and petals of lighter colour than the lip, which is almost blue: the leaves are ovate, pointed, and large; the stem being more robust than in the preceding species; the leaves are not quite so rigid as the last. This does well in a pot or basket; and, like all the rest, requires a great heat when growing, and a dry rest when it has completed its growth. A native of the East Indies; introduced in 1837.

To be continued.

ON THE PHILOSOPHY OF FLORICULTURE.

TO THE EDITOR OF THE FLORIST'S JOURNAL.

SIR,—Having read with great interest your remarks on the above subject, in the December Number of your excellent periodical, I am sure you will pardon me if I ask your explanation on a part I do not quite understand;—at least, when it is practically brought into play;—that relative to the rest of plants. Being a country amateur, and having neither space nor money to grow geraniums in the manner done about London, I cannot well picture to you my wonder and amazement at some of Mr. Catleugh's magnificent specimens, which I had the good fortune to see last June, both before and at the Horticultural Show, at Chiswick; but from what I could learn from him, and from Mr. Gaines' note in the 6th No. of the Florist's Journal, they do not seem to me ever to be allowed rest, but are kept growing all the year round. If I am mistaken in this, you will, no doubt, correct my mistake; and surely the flowers are not, or cannot be injured when some of the specimens have 1000 trusses on them. At least, this I know, that during the months of November and December, when, in my former way of growing, they never put forward a leaf, now, since I have adopted Mr. Gaines' advice, and kept my house at a temperature of 40°, I am obliged to top even those nearest the glass, from the rapidity with which they grow.

H. H. D.

ON THE ORDER ERICACEÆ.

SUBTRIBE ERICEÆ NORMALES.—522 SPEC. CULT., BESIDES VARIETIES.

THE well-known type of this order is a striking instance of the advancement of the science of Horticulture within the last fifty years; and a very pleasing subject is offered to the mind of the true lover of flowers in the consideration of the rapid progression we have made, and are still making, in this delightful art. At about the commencement of the period above named, the whole of the genus then in our possession consisted of such as are indigenous, and *one* other only, the Erica Mediterranea; but at the taking of the Cape of Good Hope this beautiful family of plants were speedily brought into notice. The beginning of the present century saw the introduction of a great number of species to this country; since when, they have been increased, and the species and varieties multiplied almost ad infinitum. But, notwithstanding this immense increase, and the very prominent place they now hold in the estimation of good gardeners, a prejudice is still entertained by some, that the cultivation of Ericas is difficult; this, though possibly correct in part, is erroneous as a whole. It may be allowed to be correct in so far that the treatment requires a little more delicacy than is generally requisite for some other plants; yet, on the whole, with a moderate share of attention they may be grown to as great perfection as any other plants in our collections. I will now detail my method of cultivation, which being pretty similar, I believe, to that of most other growers, may perhaps be useful to those who take an interest in this beautiful genus.

The first thing to be considered is the proper soil;—this should be a good rich peat, full of bright particles of sand, without any appearance of rust. Peat in its natural state seldom contains sand sufficient for the proper filtering of the water applied, consequently it is generally necessary to add some; this should be of the finest kind,—that usually known as silver sand is the best. Before the peat is used, it should be turned several times and chopped to pieces, opening it to the frost as much as possible; peat which has been so treated for two or three years is the most suitable. When about to use it, sift out a sufficient quantity, and mix it with the sand until the whole appears of a greyish colour. The pots used should always be either new, or very cleanly washed. In potting, which is one of the most particular things to be observed, always endeavour to get a good drainage; for this, break small some clean pots, put about quarter of the depth of the pot full, and over them a few knobs of peat, then some of the compost; place the plant perfectly upright in the pot, keeping the top of the ball rather above the rim of the pot; press the earth round the sides of the pot with your hand gently. It is the practice of some cultivators to ram the earth about the roots with a stick as hard as possible, in order, as they affirm, to prevent the earth drying; but this, I am of opinion, has exactly the contrary effect, for the ball being so hard offers an impenetrable surface to the water, which runs off, consequently the roots must very soon become dry, so that I greatly prefer having the soil rather loose than otherwise, allowing the water to settle the earth about the roots of the plant, in preference to any other means. The best season for repotting is the autumn ; and here I may observe that Ericas should never be removed till they have completely filled the pots with roots. Many of the dwarf kinds will stand three or four years in the same pot, they being mostly natives of the mountainous districts of the Cape, and growing in small clefts on rocks, &c., where there is but little earth for their support ; the taller and free-growing kinds require shifting oftener, and may be allowed larger pots.

When the plants are all shifted, replace them in the house, always choosing for them a cool airy situation, with plenty of light ; they must not be crowded, or mixed with other plants, as the perspiration of these frequently causes mildew. Some care is necessary in watering ; it should be given in small quantities, and at such intervals as may appear necessary to keep the soil moderately moist—not so much as to be saturated, and yet carefully avoiding the opposite extreme, for if the roots of this plant once become dry, it is not possible to recover them. The temperature of the house should be kept from 45 to 50 degrees ; fire heat is not necessary, in fact it is highly prejudicial, except in case of frost, and if that is excluded, no higher temperature is requisite. Ericas, will also do extremely well if kept in pits, and covered with mats in frosty weather ; but here they must be supplied very sparingly with water, or they are liable to damp off. Both here and in the house, every opportunity must be taken of fine weather to give them air, which should be admitted plentifully. With respect to pruning, the best season for that also is the autumn ; and I never fear using the knife freely, cutting out all old or unsightly pieces, and so keeping them always well supplied with young wood, and maintaining a vigorous growth in the spring ; and, as the plants advance in growth, they may be occasionally syringed over, though this should not be done very often. As the plants come into flower, they should be removed out of the sun, or the colours will not be so brilliant ; but not, as is often the practice, taken into halls or drawing-rooms, for there they suffer from the heated air of the place, dust, &c., and are often suffered to get dry, and then all that remains is to throw them away ; for, as I before remarked, it is utterly impossible to recover them from such treatment. If the plants at any time show signs of mildew, which is almost the only disease they are subject to,—if taken early, a little sulphur strewed over the affected parts will speedily eradicate it. The best method of propagating these plants is by cuttings. This is a very nice operation:—the cuttings should be taken off just as they complete their growth, choosing those with firm, yet not old wood; they should be from half an inch to an inch and a half in length, according to the sorts: take the leaves off about half way up the stem; but great care must be taken not to wound the stem; a very sharp knife is the best instrument: cut the end of the stem square off, close to the bottom; and having filled a flat pan with silver-sand, observing to keep a good drainage, the same as for the plants, insert the cuttings about half their length in the sand, and when full, dip the pan gently into a tank or vessel of water until it rises over the sand, yet not so high as to wet the leaves of the cuttings; this will fix them firmly, and avoid the danger of fogging, so likely to occur when watered over head with a pot: this done, fit a small bell-glass over them, and place them in a very moderate heat; bottom heat is not absolutely necessary, but if a very gentle one is applied, it is a great stimulant to early striking. Not more than one species should be planted in each pot, as it often happens that one sort will strike in seven or eight weeks, while another will require perhaps as many months; they must be carefully shaded from the sun, and the glass wiped with a dry cloth every day: if bottom heat is used, they will not require any water till they are struck; but if without, a little may be requisite occasionally, applied the same as recommended for the first watering. As soon as they are struck, the glasses should be removed for an hour or two every day till they will bear it without; then pot them off, using small thumb pots, and a very sandy soil, keeping them in the same heat for a month or so, and then inure them by degrees to bear the open air. Another method of propagation is by seed; and, by cross impregnation, new varieties are obtained. This requires much precision in the execution:—for this purpose, the stronger growing kinds should be chosen for the parent or seed-bearing plant, crossing with the dwarf or slow-growing kinds, always selecting those of opposite colours or distinct habits; if the seed is ripe by August, it may be sown at once, but if not ripe till after that time, I prefer keeping it till the spring; the same rule applies to imported seeds. When the seed is to be sown, it should be in a mixture of about two-thirds silver-sand, and one-third very finely sifted peat; the pots should be covered with small bell-glasses, and plunged in a very mild hot-bed, and occasionally watered with the syringe; as soon as they appear, they will require some attention to prevent them from drawing. Air should be given in proportion to their strength, till they are half an inch high; then pot them singly into thumb pots. Keep them in a cold frame, close to the glass all summer; and in the autumn following, they may be placed with the old plants, and subjected to the same treatment. This is about the whole course of cultivation required for this interesting family,—which may indeed be said to be pleasing to every eye, and almost at every season.

In my next paper, I purpose noticing some other of the most prominent plants composing this order, of which every genus is extremely beautiful, and of the first importance to gardeners; in short, since the Rhododendron, the Azalea, the Kalmia, the Andromeda, the Arbutus, and others equally beautiful, have been included in the order Erica, it may be said to contain some of the most splendid plants in the whole vegetable kingdom.

The Howe, Halsted. R. PLANT.

CALENDAR FOR JANUARY.

STOVE.—Forcing plants now require constant attention: keep them neatly tied up as they grow, and once or twice a day look over them with the water-pot: remove them as they open, and bring in a succession: the usual inhabitants of this place require little more than ordinary treatment; those which require it, or are intended for specimens, should be repotted this month. Neapolitan violets may be brought into force now. Forcing roses must be looked over frequently, or the "worm i' the bud" will soon destroy the cultivator's hopes.

GREENHOUSE.—The most particular thing to be observed here, is to carefully exclude frost, by keeping the house dry, and attending to fires. If the weather prove severe, the front of the house should be protected with mats, or the plants removed from the glass. The plants should have no more water than is actually necessary.

FLOWER GARDEN.

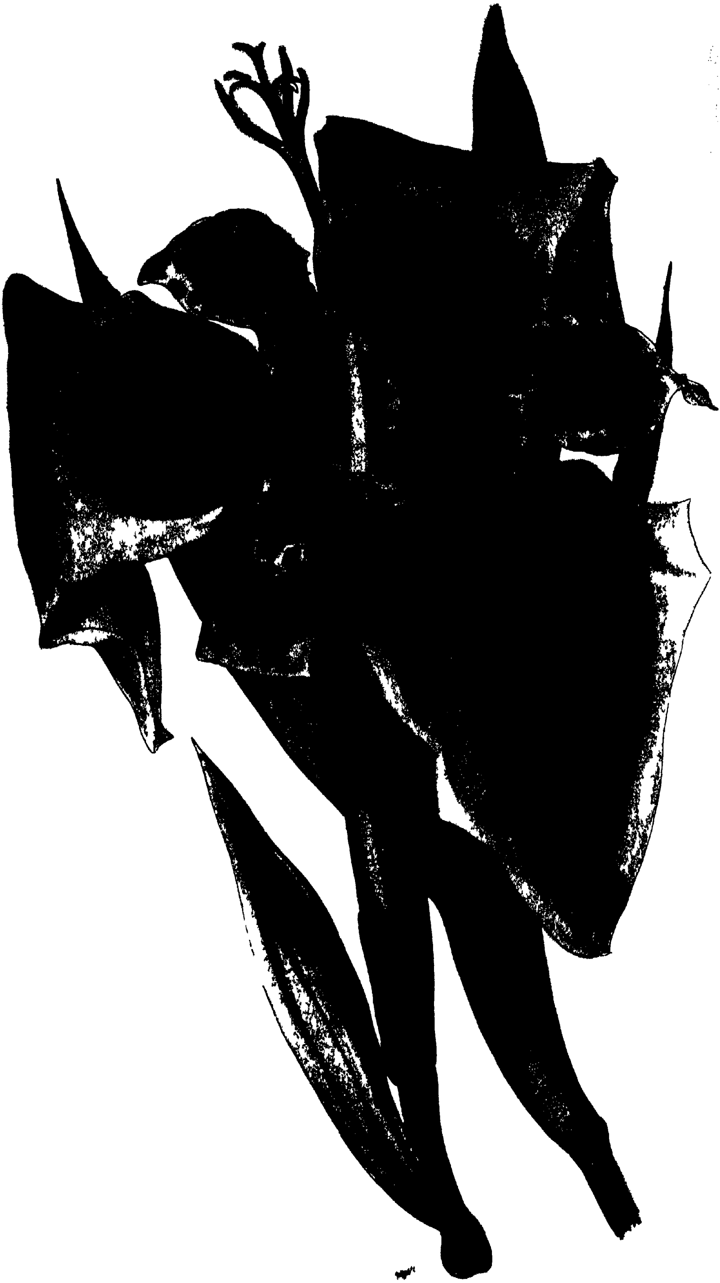
Beds of Tulips, Hyacinth, and other tender bulbs, should be protected in severe weather; also tender kinds of Roses, Magnolias, and other half-hardy trees, and shrubs. The work to be done here is confined to digging, &c. and preparing for a season more favourable to the Florist.

THE WEATHER FOR DECEMBER.

Our readers have of course not forgotten that we stated that a fall of snow was the likely result of the extreme moisture of the preceding autumn, winter, and early spring; and that this was the means by which the earth would be restored to its ordinary tone. In our number for August, we further hinted that it would be as safe for autumnal planters to prepare against an early winter; and in our November number, we stated that the floods which had occurred in the south of Europe, must tend to lessen the violence of the setting in of winter. We could not say that they would diminish the cold; because they produced cold in the south; and cold in one place does not tend to lessen cold in another, though it makes the transfer from place to place less violent.

These opinions were based on the simple, but sure, foundation of experience; and the weather in December has justified them all. The month set in with the same tranquil weather as the end of November, sometimes with frost, and sometimes without; but there was no rain or other atmospheric disturbance. On the evening of the 13th, an intense black frost set in, with the wind at east, and blowing gently. This continued all the 14th; and on the 15th snow came on gently, still with an east and south-east wind. It was not flaky, as we find the transitory snow upon a humid surface after cold produced by evaporation, but powdery snow, with some very small hail from the upper part of the atmosphere,—snow likely to remain, and afford a protecting mantle to the earth for some time. As might have been expected by any one who has paid the smallest attention to the weather, the wind shifted, and blew from the high uplands, after these had received their coating of snow; but even then it was not very violent.

How long the snow may continue on the ground is matter of observation; but, in the mean time it answers the most beneficial purpose that snow could answer. With the previous black frost, which sealed up all the pores, it prevents the radiation of heat; and if it continues a few weeks longer, it will put matters in train for an excellent spring growth. We hope that the frost, which was intense and naked only for one day, has not reached the bulbs; and while the snow continues on the ground, the frost will not penetrate any deeper, but rather the reverse, while snow has not the same tendency to draw plants up to untimely growth, as litter or other artificial coverings.



THE
FLORIST'S JOURNAL.

FEBRUARY 1, 1841.

TIGRIDIA CONCHIIFLORA.

THIS splendid flower, which we have selected as our illustration of this number, has the advantage of being anybody's flower who chooses to bestow even a very moderate degree of care upon it. It belongs to the Monandria Triandria of the Linnæan arrangement; and to the order *Irideæ*, the Iris, or Flags, of the natural system. The name is given in consequence of the rich mottling of colour upon the petals, which bears a slight resemblance to the markings of a tiger. There are only two species of the genus; the present one, Conchiiflora, so called from the shell or cup-like depression in the sepals; and Pavonia, which has the sepals red, and is perhaps altogether richer in the colours than this one. They are both natives of Mexico, from which Pavonia was imported in 1796, and Conchiiflora in 1824. Though gay, the flowers of both are very perishable, opening in the morning and fading off by the evening. Some amends is, however, made for this, in the readiness with which the succession-flowers come on; for, when properly treated, the same plant will show a new flower every day for three weeks or a month.

There is something worth attending to in those plants of which the flowers are so very perishable. They indicate great fertility; and this is exemplified in Tigridia, which produces abundance of seeds, and at the same time increases very fast by bulbs.

These plants are so free growers and so hardy, that if they are placed in a southern exposure, protected by a wall, the bulbs may be left in the ground all winter, without sustaining any injury: and they are not very particular as to the kind of soil in which they are planted. This, however, is not the method of treating them so as to obtain first-rate flowers. In order to do that, the bulbs should be taken up as soon as the stems have died down, and kept in a cool and very dry place until the end of March, or such time as all chance of frost is over. They should then be planted in a compost of loam, mossy earth, and a *little* manure, the ingredients being chopped small,—but not *sifted*, which is a questionable operation in the case of all composts. After this they require little more trouble; show fine flowers; and multiply so freely, that the produce of one or two will, in a very short time, stock a moderate bed or portion of border. The bulbs are esculent; and when roasted, the flavour of them is hardly distinguishable from that of chestnuts.

CATTLEYA.

Cattleya Aucklandia.—This is a very small and handsome species: its height is not more than two or three inches, and it has a creeping rhigoma; it belongs to the two-leaved species: the flowers are very large in proportion to the size of the plant; only one flower on the stem or pseudo-bulb; the sepals and petals are of a pink colour, with the lip beautifully marked with crimson; this does well in a pot; a rest is necessary for it when done growing; and, like the others of the genus, a strong moist heat when in strong growth. A native of South America.

Cattleya superba.—This is a noble species, and deserves to be in every collection; but it is at present a very scarce plant; and is in very few. The habit of this is like Loddigesii, but is more thickened in the upper portion of the pseudo-bulb; it belongs to the tint-leaved section of the genus; the sepals and petals are of a bluish purple, with the lips of a brilliant crimson. This has been lately introduced by that persevering traveller, Mr. Shomburgh, from Guiana. It requires to be cultivated in a pot, the same as is recommended for the other; this also requires a rest when done growing, and heat and moisture when growing.

Cattleya intermedia is another beautiful species: the sepals and petals are of a beautiful pink; the lip is marked with pink and crimson; the leaves are ovate, and serrated round the edges. It is a two-leaved species, and the habit is like that of Loddigesii; but it is altogether distinct from that species. It flowers and grows at the same time; that is, it grows and flowers, and takes its rest after. It should be potted as is recommended for the others. A native of the coast of Brazil.

Cattleya guttata elatior is a variety of guttata, and a very beautiful one: it is well deserving of cultivation, and ought to be in every collection, being a very fine flower. The leaves are ovate, acuminate, and much thicker than those of guttata; but the whole plant is like guttata. The sepals and petals are of a greenish yellow, beautifully marked with dark brown spots; the lip is more pointed than that of guttata, and of a much brighter crimson. This, like the species, flowers some time after it has finished its pseudo-bulbs. Its flowering season is in October; it begins to grow in April; and it should be potted and treated in the same manner as is recommended for guttata. It is a native of Brazil.

CARNATIONS AND PICOTTEES.

TO THE EDITOR OF THE FLORIST'S JOURNAL.

Sir,—Allow me to say a few words on the keeping of Carnations and Picottees during the winter. The author of a paper in the "Cabinet," of this month, takes credit to himself for the simplicity of his method; now, I have seen them tried in every possible way, by frames, by glass shutters, &c., but am convinced no way is so effectual as merely placing them in *coal ashes*, in pots to the rim, against a south wall, and covering them with a wooden shutter, which should always be lifted in dry weather. During very heavy rains I give them the additional protection of matting. By this method I have always fine strong plants at the time for planting; I have never lost one, nor been obliged to cut away a single decayed leaf.

H. H. D.

Dublin, Jan. 16.

NEW IMPORTATIONS

OF FLOWERING AND ORNAMENTAL PLANTS.

It has occurred to us that it might be of use to some of our readers, were we to give, from time to time, notices of importations of flowers from foreign growers, especially where the quantity imported is considerable, and the plants in a condition for being sent out. To do this regularly and effectively, will of course require the cooperation of our friends; and though, from the character of our connexion, as well as from other circumstances, we have not the least apprehension that any one will endeavour to impose upon us, yet it will be necessary, for the benefit of the parties themselves, to have all such information authenticated by the names and addresses of these parties. For the present month, we have to note as follows :—

Messrs. Rollison, of the Exotic Nursery, Tooting, have received a large and splendid importation of North American plants, some of them very rare, of which the following are the leading ones.

Cypripedium spectabile.—Of this, which is a rare plant, as well as a splendid one, they have received nearly three hundred, all in excellent condition, and fit for sending out.

Cypripedium acauli, which is still more rare than the former; like it, a most beautiful flower, and one which well deserves a place in every collection.

Cypripedium pubescens, which, although not so beautiful as either of the former two, is yet a fine yellow flower, and well worthy of culture.

Calopogan pulchellus is a fine little plant, and a very rare one. It ought to be in every collection. Messrs. R. have received a considerable supply of it. This, and the former .ones, may be grown in pots, or in a border, as may be deemed most convenient.

Trillium grandiflorum is an exceedingly beautiful plant; and no person ought to be without it, who has the least love of flowers, or the smallest bit of garden to grow them in. It does well in a peat soil.

Trillium erythrocarpum is a very pretty plant, but very rare, and seldom seen in British gardens. It does well in a mixture of peat and loam, and is quite hardy.

Trethum necterus is a fine species, with dark purple flowers, and well worth growing.

Asclepias tuberosa is a very scarce and splendid plant. A collection of it makes a beautiful bed, so that it could be grown by every amateur.

ON THE ADVANTAGE OF GARDENERS UNDERSTANDING THE GEOGRAPHICAL DISTRIBUTION OF PLANTS.

SUBSTANCE OF A PAPER READ TO THE WEST LONDON GARDENERS' ASSOCIATION, BY MR. WILLIAM KEANE.

In the study of any trade or profession which an individual may be inclined to pursue, the great advantage is to know the particular subjects most necessary to be acquired; and as I, in my humble opinion, consider the geographical distribution of plants very necessary to be studied by gardeners, I will, without further preliminaries, enter into the investigation and elucidation of the subject.

As we advance from the pole to the equator, we observe the temperature gradually increasing; and as we ascend from the surface of the sea into the atmosphere, we find the temperature gradually decreasing until we reach a boundary where our further inquiries are stopped by the deep snow, and where vegetation ceases. In taking into calculation the vegetation of a given climate, it is necessary to investigate the temperature peculiar to the latitude itself, and the reduction caused by elevation.

The effect of elevation is not the same in Europe with all plants: there are many that are found to grow indifferently upon the valleys and upon mountains, as high as perpetual snow; but, on the other hand, there are many whose boundaries are circumscribed, either by elevation or equivalent temperature. Many plants indigenous on the plains in the north of Europe, occupy the mountains of the south. The causes of the influence of elevation upon plants are ascribed to reduced temperature, to a greater intensity of solar light, and to a decrease in humidity.

The rarefaction of the air as we ascend, produces a corresponding increase in the intensity of light. In taking a view of the influence caused by latitude, we find that, in the countries situated near the equator, the vegetation consists of palms and thick jungles, or forests of evergreen trees: as we retire from the equator, trees with deciduous leaves, pinus, &c., gradually appear, rich pastures open to the prospect, mosses surround the trunks of old trees, and decayed and decaying vegetables are covered with fungi. As we approach the poles, trees wholly disappear, and lichens constitute the chief features of vegetation.

Although a number of places may have the same annual temperature, yet they have not the same climate. There are the secondary constituents of climate: such are—the situation of the place, its distance from the sea, its proximity to mountains, its elevation above the level of the ocean, the nature of the soil, the cultivation of the lands in its vicinity, and the direction of the winds to which it is exposed,—these, and many other local phenomena, may so affect the results which would otherwise be produced by solar heat, as to prevent any hope of ascertaining a climate without experiment. Instances are frequent of the same plants being found growing as indigenous in Europe, Asia, Africa, and America; but the most rational and feasible way to account for it is to suppose that the plants must have been originally created where they now vegetate, the contingent circumstances under which they were found having been favourable to the particular mode of vegetable development which was necessary for their formation. We also find, in general, that the habits and customs of men are influenced by the nature of the soil, and the climate which they inhabit;—the unpolished and hardy mountaineer derives his character from that of his native hills; the warm and luxurious plains of the south impart indolence and inactivity; the cold and barren scenes of the north produce a brisk and persevering activity.

I will now enter into the subject of the effect light has upon plants. Though some species of plants seem to derive their very existence from the direct and vivid rays of the sun, while there are many others unable to endure its more immediate influences, Orchideous plants, when exposed to the powerful blaze of a meridian sun, lose all that rich luxuriance for which they are remarkable; their leaves become brown, and their growth is very much checked, if not entirely suspended. On the other hand, the ill effects of an insufficient quantity of light for those plants that require it more abundantly, are made manifest by their stems becoming elongated, etiolated, and consequently weak and slender, and by the leaves assuming a pale and sickly appearance; and if it is withheld for any great length of time, will certainly perish.

As a general criterion to judge of the nature of such plants that require the full power of the sun's rays, we find that those of a juicy or succulent substance, which produce a great quantity of leaves, and expose a large surface to the atmosphere, require a great intensity of light, and are always found in those situations where a great supply is given to them. Those plants which are very porous, and are abundantly furnished with organs of evaporation, and those which are nearly destitute of foliage, are generally found in shady places, and abound most in the recesses of tropical forests, where the direct rays of the sun never penetrate. For the elucidation of the above remarks, I think it necessary to allude to the plants which were found at Chatsworth, to bear out the subject. The *Cacti*, *Opuntia*, *Mysembrianthemum*, and all plants of that succulent nature, require a great intensity of light; Orange Trees, instead of being kept in dark houses, and exposed, as they generally are in autumn, to the direct rays of the sun, which must be injurious to them, by such sudden transitions of light, on the general principles recommended, ought to be more exposed to the rays of solar heat. Geraniums may be classed with the other plants which receive great benefit from a full exposure to the influence of light; while Camellias would be found to succeed best in a comparatively shady situation, where they flower well, and attain that luxuriance of foliage which is one of their chief ornaments. Hothouse Climbers are found in their native countries climbing on the branches of trees in large jungles where the rays of the sun never penetrate; and instead of being exposed as they generally are in our stoves, they would be found to succeed better in more shaded situations.

In the successful cultivation of plants or fruits, it is necessary to erect a house for them which would be properly adapted to the habits of the plants or fruits; and that they should receive the rays of light vertically, and not obliquely; and to form such a slope of roof as shall be at right angles to the sun's rays, at whatever season it is intended to ripen the fruit. The angle of 45° is generally used by gardeners; and in the latitude of London the rays would be perpendicular in the early part of April and in September. To have the greatest benefit of the sun's rays in ripening fruits in July, an angle of 34° is best for the purpose.

A diagram was produced by my friend, Mr. Judd, explanatory of the perpendicularity of the sun's rays at all seasons of the year; and which could be practically worked out to suit all latitudes. The history of animate and inanimate nature is always interesting to a gardener, as it introduces him to an intimate acquaintance with subjects closely connected with his profession. Now that steam, the annihilator of time and space, is sure before long to form into one brotherhood the dispersed nations of the earth, we may expect that civilization will advance with rapid strides, that national prejudices will gradually vanish, and that the philanthropic feeling of good wishes for the intellectual and moral improvement of all mankind will be more generally diffused among the nations of the earth; the facility and frequency of intercourse by steam producing intimate social connexions, reciprocation of benefits will inevitably tend to unite and assimilate nations now remote in distance and opposite in character. It is closeness and frequency of intercourse that most strongly cements, and most surely maintains friendship and good will between nations and between individuals.

In conclusion, I beg to direct the attention of any of my gardening friends who would wish to receive further information on the subject, to procure "Humboldt's Travels," where they will find many calculations and observations made which will be found very instructive in their practice.

NOTE BY THE CONDUCTOR.—"*The West London Gardeners' Association for Mutual Instruction*," at one of whose meetings the paper, of which we have inserted an abridgement, was read, is a very meritorious voluntary assemblage of practical Gardeners and Florists, for the purpose of instructing each other in the higher and more difficult departments of their delightful profession. Their meetings are held every alternate Monday, at eight o'clock in summer, and seven o'clock in winter; the place of meeting in the meantime is the Public School Room, at Waltham Green; and ten o'clock is the hour for closing. The fees of admission and the annual payments are remarkably low, being only two shillings and sixpence for a head gardener, and one shilling for an apprentice. By this means the meeting is open to all parties; and we must add that the committee, chosen half-yearly, are remarkably attentive and judicious in their management; many excellent papers have been read, and many important points discussed. Upon the whole, we consider the example of this institution well worthy of being followed by the florists and gardeners of every locality in which there is a sufficient number. This is a real seminary of knowledge, and something more; it is "every man helping his neighbour, and saying to his brother, Be of good cheer."

THE WEST LONDON GARDENERS' ASSOCIATION FOR MUTUAL INSTRUCTION.

Tuesday Evening, Dec. 1, 1840.

MR. MORSE read his paper on the culture of the Auricula.

After a short preface to induce gardeners to bring them into more general cultivation, as their beauty and fragrance make them valuable acquisitions to the drawing-room or conservatory, when the supply of flowering plants is very limited at that early season of the year, he objected to the many ingredients recommended by most florists—such as bone-dust, soapers' ashes, sugar-bakers' scum, and other composts difficult to be obtained. His practice, which insured him good healthy plants and fine blooms, was to take four barrowfuls of good maiden loam of a sandy nature, two of good rotten dung from an old cucumber bed, two of peat, and two of leaf mould, well incorporated and frequently turned over, particularly in frosty weather, for twelve months before using. He pots them in July; and in dividing any that are found to want it, he pulls asunder the offsets, as he observed that the use of the knife will frequently cause the decay of the plant. In preparing 32-sized pots for the large and best rooted plants, he puts a drainage of potsherds at the bottom, and over them about one inch thick of moss, to make it more permeable, and in which the roots are found to luxuriate; he sometimes potted a few of his largest plants in 24-sized pots, but was always very careful in selecting the sizes of his pots to suit the state of the roots. The offsets, planted round the side of the pot, are placed under a hand-glass near a south wall; when rooted and shifted they are removed to a temporary stage, fixed to a wall with a north aspect, the better to shade them from sunbursts, covered with old sashes, which are nailed to a strip of wood at the back, and secured in front on posts. All his plants were protected in that manner, the sashes being removed occasionally to allow a gentle shower of rain to descend upon them, particularly in their growing season, as it would be injurious to them in winter, when in a dormant state, unless favoured soon after with a brisk wind to dry their foliage. About the last week in October he placed them in a common frame, with bricks at the bottom, for the purpose of preventing the ingress of worms to the pots, and to elevate the plants to a proper distance from the glass. He advised air to be given at all favourable opportunities, especially in damp weather, and to use a spouted pot on all necessary occasions, to prevent the admission of water to the hearts of the plants, by which they are much injured, if not entirely destroyed, and more certainly if shut up close after being watered. About the latter part of February the plants were top-dressed to the roots, with the same compost screened fine, and pressed down pretty firmly. Water to be given, more or less, as they are observed to advance in growth. He was careful to guard against frost, to remove all decayed leaves, and when the flower-stalks advance, to thin out, with a small pair of scissors, the truss, leaving from five to ten pips, according to the strength of the plant. When the flowers begin to expand they are removed to the greenhouse, or any other place where they may be required, to be shaded from the sun to prolong their term of flowering. To prevent their damping off, caused by drip, or by water getting into the heart of the plant, he placed the pots on their sides until they became dry, which he is sure saved many valuable plants in his collection from ultimate destruction. The following is the list of Auriculas which, in his experience, he found to be the best, and which he is certain will give satisfaction to the cultivator.

Waterhouse's Conqueror of Europe.
Hedge's Britannia.
Thompson's Scotch Wallace.
Grimes's Privateer.
Taylor's Glory.
Page's Waterloo.
Crompton's Admiral Gardner.
Hodson's Prince Leopold.
Kenion's Ringleader.
Leigh's Colonel Taylor.

Miller's George the Fourth.
Moore's Jubilee.
Pearson's Badajos.
Smith's Waterloo.
Howard's Lord Nelson.
Faulkner's Ne plus ultra.
Page's Duchess of Oldenburg.
Smith's Britannia.
Polet's Standard of England.
" Ruler of England.

Lee's Bright Venus.
Metcalf's Lancashire Hero.
Mills's Major Cartwright.
Potts's Beauty of England.
Laurie's Adonis.
" Glory of Cheshunt.
Syke's Complete.
Tomlinson's Commander.
Warris's General Blucher.
Wringley's Northern Hero.
Berry's Lord Primate.
Dickson's Apollo.
Kenion's Lord Chancellor.
Whitaker's True Blue.
Egyptian Queen.
Nicholson's Venus.
Miller's Conspicua.
Burley's Superb.
Fletcher's Emperor Alexander.
Taylor's Ploughboy.
Thompson's Revenge.
" Bang up.
Page's Champion.
Oliver's Lovely Ann.
Howard's Sweepstakes.
Lee's British Crown.
Netherwood's Othello.
Gorton's Stadtholder.
Ned Ludd.
Booth's Freedom.

Mr. Shearer believed that they required great attention to bring them to a high state of perfection; that it would be unwise to place them in a conservatory exposed to midday sun, to fade and to abridge their season of beauty. When shifted, the decayed roots to be removed, and then placed beside a north wall for the advantage of shade; he objected to the use of 32-sized pots, as they are very apt to suffer from over-potting.

Mr. Massie admired the paper for the plain and simple mode of treatment adopted, which is best for all plants when they are found to thrive and flower well. As expense was an item of consequence in many places, he recommended to stand them beside a wall with a west aspect, to be protected by a temporary structure of boards, and in very severe weather a few mats to be tied in front; he objected to their introduction to the drawing-room, as they suffer much by the removal and neglect in such an uncongenial atmosphere.

Mr. Shearer preferred to grow them in frames to a stage, but a stage facing the north was useful.

Mr. Sherwood observed that the compost he used was the same as Mr. Morse recommended; during winter he kept his plants under hand-glasses, in a veranda open to the south, but sheltered from all the other quarters; the tops of the hand-glasses could be removed at pleasure, and were never put on but in very severe weather; he removed them to a cold frame, and top-dressed them about a month before flowering. When the blooms expanded, to be removed to the green-house or conservatory. His object in keeping them in a dry situation in winter was, to imitate their natural climate, being natives of the mountains in Switzerland, in altitudes considerably affected by cold: but that does not warrant us to suppose that they would bear the same low temperature here, when deprived of their hardihood by a long course of cultivation. That they were improved by manure, if judiciously employed; and that nature had provided for them decaying vegetable matter by which they were surrounded; for while the long roots penetrated far into the almost sterile earth, by which a sufficiency of water was secured, they developed fresh absorbing organs around the base of the stem, by which they could extract nutriment from the decayed matter on the surface of the earth. He explained the different qualities of water to prove the advantage of selecting that element most essential to the health of the plant; and entered into a physiological explanation of the cause of that powdery matter observed on Auriculas.

Mr. Caie admired the essay, detailed the practice recommended by Hogg, and advised, if placed in the conservatory or any other desirable situation, to be elevated near the glass, and shaded during bright sunshine.

Mr. Keane had used bone dust, which was a gentle stimulating manure, and very gradual in its decomposition. Any diseased part of the plant, which is readily caused by too much wet or any neglect, was scraped out, and tallow applied to the part. He never observed that the blooms received injury from exposure to the sun, when its influence at that early season of the year was very mild.

Mr. Gribbins was obliged to Mr. Morse for bringing forward such an excellent paper. However they may be situated in nature, he would not, in culture, expose them to cold winds or frosty air.

Mr. Sherwood agreed with Mr. Keane that bone dust was good manure for them. He sowed seeds in April on shallow boxes or pans in light sandy soil, placed in a warm situation in the open air, to be kept moist, but protected from heavy rains.

Mr. Massie was opposed to the use of bone dust; frames were useful, but he preferred to place them in the situation he described, kept cool, as the least excitement from heat will dwindle them.

Mr. Caie made a few observations on the nature of the powdery matter on the plants; and observed that the natural situation in which they are found growing on high mountains in Switzerland, surrounded by very transparent air, and by altitude protected from the influence of strong sun—all these certain circumstances tended to perpetuate the colours.

Mr. Mc Evoy believed, if the system recommended in the concise and modest essay was followed, that success would be the consequence. He has seen them do well exposed to the influence of the sun, by which the proper juice, the grand principle of vegetable organization, is elaborated, and sheltered in the shade to prolong the vivid colours of the flowers. He planted his offsets along the margin of a border, in a shady situation, closely compressed, where they flowered remarkably well. He saw them grown in vegetable mould, obtained from the decayed trunks of old oak and willow trees, with a small portion of well decomposed dung, by a gardener who always obtained the first prizes for his plants. As a proof of their hardihood to bear a very low degree of temperature with impunity, he observed, that a gentleman at Weymouth, in the severe winter of 1837-38, kept his valuable collection of Auriculas beside a south wall, covered with ferns, and he did not lose six plants. His practice was to syringe them indiscriminately; if any became sodden to turn the pots on their sides; to expose them in the winter months to all the sun possible, plunged in saw dust, and covered with shutters during the sharp and cutting winds. The system of the plant being changed by culture, the natural state of growth on the declivities of Switzerland, covered with snow, may be a useful hint; but would be a useless practice for an artificial and improved system of cultivation. He used deers' and sheep's dung manure water, as very stimulating manures produce a luxuriance of foliage injurious to the development of the flowers, and causing the premature decay of the plant.

Mr. Bell thought a shaded situation was indispensably necessary for them; and that it was not of so much use to know what very low degree of temperature they will bear without injury, or the analysis of water to procure the most agreeable for them, as it would be to obtain practical information of the best method to grow them for the production of fine trusses of odoriferous flowers.

Mr. Shearer saw the sorts indigenous to Scotland covered with snow for several weeks; but the good sorts in cultivation should be nurtured with care and attention, and supplied with proper stimulants to bring them to the highest state of perfection in which they are exhibited by florists.

Mr. Sherwood alluded to a paper on Heartsease by a Mr. Earl, in which unfermented dung was recommended as producing more carbonic acid and ammonia, than if well rotted. It was carrying out the doctrine of Sir H. Davy; but while the use of it for Heartsease might be good, it would be productive of serious injury to other plants; therefore the practical gardener should not be led astray by any scientific doctrines, however plausible, but to exercise his own judgment and discretion to ascertain how far they are applicable, and when they should be rejected.

Mr. Caie observed that the plausible theory promulgated by Sir Humphrey Davy, that manure was most nutritive when applied in a fresh or undecomposed state to the roots of plants, was proved to be erroneous by the practice of all Agriculturists and Horticulturists.

Mr. Keane explained that Sir H. Davy believed the ammonia and gases generated by fresh dung would increase the temperature of the soil, and would be imbibed by the sponglets of the roots to nourish the plant. He valued the science of chemistry, as far as it tended to teach the gardener the properties of soils, by which he would be able to incorporate the different ingredients to form the compost best adapted for the culture of each particular tribe of plants.

Mr. Morse concluded the discussion by entering fully into the details of his practice, which escaped his notice when writing his paper.

NOTES ON PELARGONIUMS, &c.

The paper to which H. H. D.'s communication refers, had reference to plants which are strictly seasonal; but it by no means follows that *all* the plants of tropical, or any other latitudes, are of this character. Plants are adapted to places, not places to plants,—though in our artificial treatment we must adapt the place to the plant.

Now, in most extensive countries where the seasons are marked more by rain and drought than by heat and cold, there are places which are seasonal, and others which are not. Some plants are adapted to the one of these, some to the other, and some to both. Of the last some are hard-wooded and some soft-wooded shrubs; and even in the most tropical climates, the very same species may be found naked on the parched plain, and in all the luxuriance of its foliage by the bank of the perennial stream.

Pelargoniums are soft-wooded shrubs of this description. They are not tropical plants, for the whole 558 species, including hybrids and their endless varieties, are natives of the Cape Colony, with the exception of two or three from other parts of Africa, about the same number from the Canary Islands, and one from Tristan d'Acunha, which is in a still higher latitude than the Cape. The latitude of the Cape answers to that of Barbary and Syria; and though, upon the margins of the desert there, the vegetation is seasonal, yet, where there is sufficient moisture, it is ever-green and almost ever-growing. This is, in fact, the intermediate latitude, between the tropical and the temperate,—between the winter of drought and the winter of cold; and in so far as the solar action and its distribution are concerned, the tendency is to perennial verdure; and there are many of the plants that die down or become leafless on the arid places, that would have very different characters if transplanted to the humid ones. The currents of the atmosphere, and the character of the surface and soil, may occasion great modifications; but wherever there is the proper supply of moisture, vegetation is always true to the degree and distribution of the solar energy.

It is precisely the same with the Cape Colony. The violent drought of the south-east monsoon, and the deluging rain of the north-west, give it a highly seasonal character in all exposed places; but uniformity of seasons is its essential character, as depending on the sun. It follows, as matter of natural consequence, that this also should be the essential character of its leading vegetation. By the banks of the seasonal torrent on the Karoo, the Pelargoniums have thin leaves, and suspend their growth during the extreme drought; but bring them to the moist places, and they would be ever-green, and nearly ever-growing; and this last is really their natural situation.

It is true that, toward the end of the dry season, their growth *is a little diminished even there; and in our culture, they are the better for being in the open air during the last part of* summer, and the first of autumn; because this makes them less tender than if they remained in the green-house all the year.

If this exposure is continued just long enough for giving the plants a little consistency, but not so long as to suspend their action by driving it into the wood and buds, then they are in proper condition for obeying any stimulus, either for forcing, or for a fine natural bloom early in the season. But if it is carried too far, they lose their leaves, do not answer for forcing, and do not bloom so early or so rich. All of which shows that, though they can bear drought, neglect, and any degree of cold, above absolute frost, for a portion of the year; yet, that their nature is essentially adapted to the ever-green districts of their native regions. It is this adaptation to two modes of treatment, together with their redolence of life in every joint, and the greater number being essentially one species, that have rendered these plants such obedient and plastic things under the hand of the skilful cultivator. There are few, if any, plants more easily propagated, either by cuttings or by seeds. The first is used chiefly to increase the number of an approved variety, and the last to obtain new varieties by cross impregnation. The vast success which has attended Pelargoniums should lead those who speculate in plants to try other soft-wooded shrubby ones which are natives of similar places.

CONDUCTOR.

ON THE CULTIVATION OF DENDROBIUM.

BY MR. P. N. DON.

(Continued from p. 18.*)*

16. *Dendrobium Cambridgeanum.*—The flowers are bright orange. This is a beautiful species; the leaves are ovate and acuminate, alternate on the stem, or pseudo bulb; the flowers come out opposite the leaves, two and three together; they are very large; the stems, or pseudo bulbs, are compressed and thick; they do not grow to any great length, but this is a very distinct species. It is pendent, and thus does best in a basket; requires a cool and dry rest; when growing, requires plenty of moisture and great heat. A native of the East Indies; introduced in 1837.

17. *Dendrobium aureum* is another beautiful species: the sepals and petals being of a light gold colour, with the lip like burnished gold, and somewhat fringed. It is an upright growing species, the pseudo bulbs being very small at the base, and thickening towards the top, which gives it the appearance of a club; does well either in a basket or pot; requires a good rest when done growing. This, like all the others, requires to have its flowers grown and expanded in a moist heat; so that all of them as soon as theyshow for flower, should be taken out of the dry-house, and put into the moist and hot one, till such time as the flowers are expanded; they then should be taken into the dry-house, there to remain till they have finished flowering; they then should be taken back into the growing-house. A native of Ceylon; introduced in 1837.

18. *Dendrobium Paxtoni.*—Colour of the flowers is orange and yellow, that is, the sepals and petals are yellow, while the lip is orange. This is a neat and handsome species; the leaves are Linnean pointed, of a pale green. This is not a large growing species. The flowers proceed out from near the top of the pseudo bulbs, opposite the leaves, in spikes: a native of the East Indies; introduced in 1837. It does well either in a basket or pot; requires a dry rest when done growing, as all the species do; and they all require plenty of heat, and to be well watered and syringed when growing, that is, after they have got into a strong state of growth. When they are taken out of the dry-house for flowering, very little water should be given, but they should be gently syringed.

19. *Dendrobium denudans* is a pretty species: the pseudo bulbs are about one foot and a half long, pendent when well grown; the leaves are ovate and pointed, very small; the flower spikes come out opposite the leaves, about ten on a pseudo bulb; the flowers are white; the sepals and petals are white, and very linear; the petals fold over the column, while the sepals spread out, the lip is of a greenish white, and round and recurved at the apex: a native of Nepaul; introduced in 1838. This requires a dry rest when done growing; a basket is best suited for it; this flowers as soon as it has completed its growth.

20. *Dendrobium stuposum.*—The flowers are white; the sepals and petals are of a greenish white, while the lip is almost a pure white, beautifully striped, or rather veined; the leaves are

linear, and lanceolate, and small. As this is a somewhat pendent species, a basket does well for it: a native of the East Indies; introduced in 1837. This requires a very dry rest when done growing; and flowers at the commencement of the growing season.

21. *Dendrobium heterocarpum.*—This is like aureum in its growth, and appears not to be a large growing species; the flowers are golden coloured, with the sepals and petals yellow, the lip being gold. It is a very beautiful species, requires a dry rest; is a native of the East Indies; introduced in 1837. This does well in a pot; is an upright species.

22. *Dendrobium longicornu.*—This is a very handsome species: the flowers are bluish, the sepals and petals being of greenish white, while the lip is marked with orange yellow and pink, or a white ground; the lip has at the base a long spur, which gives the name; the leaves are lance-shaped, hairy, as well as the stem or pseudo bulb, which gives the plant a singular appearance; does well on a log of wood with sphagnum: a native of the East Indies; introduced in 1828. This also requires a rest when done growing: flowers early in the season.

23. *Dendrobium plicatili* is a very singular species: a native of Manilla; introduced in 1838. The flowers are of a greenish yellow; the sepals and petals are somewhat brown, and the lip is beautifully round or plaited, being of a greenish yellow, with a few purple spots; the pseudo bulbs are club-shaped, very much branched; each pseudo has only one leaf, which makes them have a very naked appearance; the flowers come out from the top of the pseudo bulb, only one or two at a time, and they only last one day, so that it may be called a diurnal species. This does well on a log, or in a basket; the leaves are ovate.

24. *Dendrobium multicaule* is another of the single-leaved species; in habit somewhat like the last, but it is more branching, and smaller in all its parts; the flowers are of a pale bluish; the lip is marked with red and pink, and large and folded inwards, which gives it a very singular appearance; the flowers come out at the top of the pseudo bulb in the same manner as the last, and last only one day: it is by no means a fine flowerer. A native of the East Indies; introduced in 1835

25. *Dendrobium densiflorum*, an upright growing species; beautiful, and a most abundant flowerer. This is another of the many

that are well worth cultivating; the spikes come out near the top of the pseudo bulbs, and opposite the leaves; it bears only three or four leaves at the extremity of the pseudo bulb; the flowers are yellow, but the sepals and petals of a paler colour than the lip, which is of a rich yellow; this requires a rest when done growing; flowers in the early part of the season; is a native of Nepaul; was introduced in 1833; and does better in a pot than in a basket.

26. *Dendrobium sulcatum.*—Furrowed. The flowers of this are yellow, in spikes like the last, but not quite so large. This is an upright growing plant, with from two to three leaves at the top of the pseudo: the bulb is compressed and furrowed; the leaves are ovate, and of a dark green; a handsome species, and scarce; flowers in the autumn: a native of India; introduced in 1837. Does best in a pot; and requires a cool dry rest.

27. *Dendrobium candidum.*—Flowers white. This is a very neat species; a native of the East Indies; introduced in 1836; flowers at the beginning of the growing season; a rare plant; a pot or basket does well for it; and it requires a dry and cool rest.

28. *Dendrobium formosum* is the most splendid of all the species: the sepals and petals are of a yellowish white; the lip is ivory, and very large; the leaves are ovate and acuminate; hang with the stem or pseudo bulb; a very scarce plant; does best in a basket, as it is a pendent species; and is a very robust-looking plant; requires a dry and cool rest when it has completed its growth: a native of the East Indies; introduced in 1837. Every person who has a collection, ought to try and get this plant.

29. *Dendrobium aggregatum.*—A lovely species, and an abundant flower. When well grown, the spikes will produce as many as twenty flowers on each; and each pseudo bulb will have two and three spikes; and when the plant is large, it will be covered with yellow and orange. The sepals and petals are of a bright yellow, and the lip is orange; the flowers are very large; the leaves are thick and rigid, lanceolate, obtuse, or rounded at the apex; the pseudo bulbs are small, and only one-leaved. It is not like any other Dendrobium, with the exception of Jenkinsii; the flowers when first expanded, are very pale, but in a day or two will come to their brilliant colour. This is the case with many other of the species: a basket or pot suits this best; and it requires a dry rest: a native of the East Indies; introduced in 1828.

30. *Dendrobium Jenkinsii* is a very pretty species : the flowers are yellow; and very large for the plant, which is very small, and resembles a small variety of aggregatum ; but is a well marked species : it does well on a log of wood, better than in either a basket or pot ; flowers at the end of the autumn : is a native of the East Indies ; introduced in 1837.

31. *Dendrobium speciosum.*—A strong growing species: a native of Australia: the leaves are broadly ovate and retuse, and of a strong texture, being rigid ; the flower's stem proceeds out of the top of the pseudo bulb, and rises to the height of two feet when the plant is in fine health ; the colour of the flowers is a flush red. This also requires a very cool and dry rest when done growing ; it does best in a pot : introduced 1801.

32. *Dendrobium æmulum.*—A very pretty species ; a native of Australia : the pseudo bulb does not grow larger than two inches high ; the flowers are white and striped with purple ; the sepals and petals are white ; the lip is curved downwards, but the petals laying over the upper portion of the lip, or rather the column ; the sepals spread out in the same manner as they do in *Dendrobium denudus ;* in fact, the whole flower is like that species ; the leaves are small and ovate, and are very stiff and rigid, only one leaf to the pseudo bulb ; the flower stems come out at the top of the pseudo bulb, and droop, which gives the whole plant a neat appearance. It is a very abundant flowerer, and loves to grow on a piece of very hard wood, and to be suspended ; requires a very dry rest : introduced in 1822.

33. *Dendrobium rigidum.*—A native of Australia. This species has not flowered in this country as yet, at least not that I know of : introduced 1824 ; does best on a log of wood ; and also requires a dry and cool rest when done growing.

34. *Dendrobium linguiforme.*—Tongue leaved. This is another curious species ; the leaves are very short and thick, and on very short and narrow pseudo bulbs, or rather stamens, for pseudo bulbs they cannot be called : the whole plant is a little creeping tuft of dark-green thick leaves ; the flowers are white and striped ; the sepals and petals are white, and the lip is striped with purple ; the flowers come out from the base of the leaves, or at the top of the stems ; the flowers are near the same form as those of æmulum : introduced in 1810. This does best on a log of wood, with very little moss about it ; requires a dry and cool rest, or it

never will flower, but will continue to grow on; when rested will flower freely.

35. *Dendrobium teretifolum.*—Threadlike-leaved. Another neat and pretty species; a native of Australia; the flowers are purple; the leaves are thready; the stem is very small. This requires a dry rest: introduced in 1823: does best on a piece of wood.

36. *Dendrobium Heyneanum.*—A native of Bombay; introduced in 1828. I have never seen this species flower. It is a drooping species, and requires a basket to grow it in; the leaves are lanceolate-cumulate. This requires, like all the rest of the genus, a dry rest when done growing.

37. *Dendrobium cassythoides.*—The flowers of this species are yellow; and it is a very beautiful and handsome species: a native of Australia.

38. *Dendrobium amplum.*—The pseudo bulbs are formed like a species of Maxillaria, more than that of a Dendrobium; having to each pseudo bulb a long segome; the leaves are lanceolate and acuminate; the leaves and pseudo bulbs are of a pale yellow colour; the pseudo bulbs are small, and four angular. I have never seen the flowers of this species, but I believe they are orange, and very large, having only one flower to each pseudo bulb; the stem on which the flower is produced is only about one inch and a half high, and proceeds from the top of the pseudo bulb: is a native of the East Indies; introduced in 1837: is a very scarce plant; its species requires a dry rest to flower it; does well on a piece of wood.

39. *Dendrobium alpestre.*—The leaves are linear and very short; the pseudo bulbs are not more in height than an inch and a half; the roots are few and very small; the flowers are white; the sepals and petals are white, with the lip of a greenish white, striped with purple; the spikes of flowers proceed out from near the apex of the pseudo bulb, and they droop down much in the same way as they do in denudus and æmulum, and several other species; it is a beautiful little plant; and is a very abundant flowerer when well grown. It ought to have a good rest, after it has done growing and flowering; is a native of Napaul; found growing on rocks: introduced in 1839: does best on a log of wood; and should not have too much moss about it.

40. *Dendrobium Macnæi.*—A native of Ceylon: is an erect

growing plant, with the leaves ovate-obtuse, livid at the apex, and large, and of a light green, with the pseudo bulb branching out into other pseudo bulbs or stems; the flowers are whitish yellow; they come out at the apex of the stem; they do not have any stem to the flowers, but they are sepile at the apex of the pseudo bulb: introduced in 1838: does well in a pot, or on a log of wood; and is a rather pretty-looking plant; a dry rest is necessary for this, as well as the others.

41. *Dendrobium Dalhousianum* is a pendent species, and I believe is very beautiful; the flowers are orange, with the sepals and petals of a lighter colour; the stems or pseudo bulbs are not large; the leaves are broad at the base, and acuminate at the apex, of a brownish colour, with the pseudo bulb; a handsome species; a native of the East Indies; introduced in 1836: this requires a dry rest; and flowers at the beginning of the growing season.

42. *Dendrobium elongatum.*—This species is the Dendrobium speciosum in miniature; it is a native of Australia: the flowers are yellow; the sepals and petals being of a paler colour than the lip; the flowers proceed out at the apex of the pseudo bulb, and a slender stem, and are erect; flowers at the commencement of the growing season: introduced in 1834: is a pretty species; does best on a log of wood; and requires a very dry and cool rest.

There are many other species, that have not yet flowered in the country, which I shall take notice of as this work proceeds; or as the various species come into flower.

When the plants show flowers, they should be removed out of the dry-house, and placed in the growing-house, and now and then syringed till such time as the flower-buds are about to open. At the same time, a very little water should be given; but the moisture should be kept up so that the buds may swell to their proper size; and when they have opened fully, or at their full expansion, they then should be removed back into the dry-house, there to remain till the flowers are over; then take them back into the growing-house, there to grow; and plenty of water should be given, as I have already recommended, and besides they should be well syringed. The heat of the growing-house should range from 70 to 100 degrees; and that of the dry-house from 60 to 70, but should never be higher than 70, though it may even go as low as 55, without the slightest injury to the plants. When they are dry, great care must be taken to see that the plants have their pseudo bulbs properly finished off, before they are taken out of the growing-house and put into the dry-house; for unless that is done, they would be apt to shrivel, and then the plant would most likely be condemned, and that without having a proper trial. In a large collection, by this system, there will always be a constant succession of flowers, for some of the species will require to be taken out of the growing-house into the resting-house, while, *vice versâ*, they will be coming out of the dry-house into the growing-house at all seasons of the year. For the most part, all the leafy species lose their leaves, while those with few and thick leaves are not apt to lose them so soon as those that are more leafy, and have the leaves of thinner texture.

Tooting Nursery. P. N. DON.

CALENDAR FOR FEBRUARY.

STOVE. — The plants here will now begin to push for their summer's growth; they will, consequently, require more attention; as they grow they should be trained in proper order, and where too thick the shoots must be thinned. Water may be given plentifully. Forcing flowers will still continue in beauty; treat them the same as for last month. This is the best time for sowing seeds of stove plants, and other modes of propagation. Amaryllas will now be coming into flower; give them but little water till the flowers open; then increase it gently.

GREENHOUSE.—All soft-wooded and free-growing plants require shifting this month. Pinch off the points of the shoots of all such plants; this keeps them bushy, and increases the number of flowers. Air should be given on every fine day for about four or five hours, though, perhaps, on the same day a little fire may be necessary at night. Camellias will now be blooming; they should have a tolerable supply of water; and it may be given in larger quantities to the other plants also.

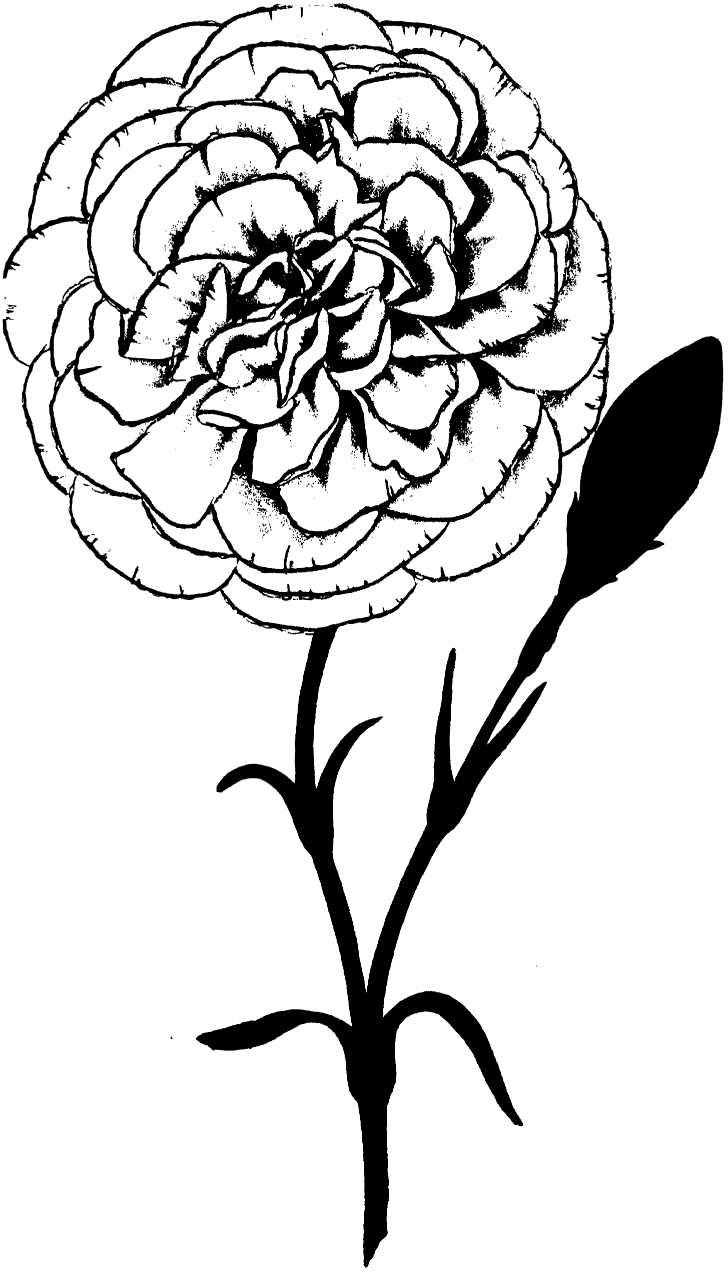
FLOWER GARDEN.

Auriculas will now require constant attention; they should have a little top-dressing at the end of the month. Ranunculus should now be planted. Tulips should have all the weather; and those bulbs that have been covered during winter should have the covering removed by degrees. Alterations may still be made. Roses for forcing next season should now be potted. Dahlias may now be started in a gentle bottom heat, and the cuttings taken off for striking as soon as they are about three inches long. Pansies may now be planted out for an early bloom. A few tender annuals may be sown.

THE WEATHER FOR JANUARY.

In noticing the weather for December, we remarked that it had set in for what may be called a good and wholesome, but very severe, winter. The frost which set in in December, and was soon followed by a mantling of snow, did not give way till the close of the month; and then it did so only partially, and for a short time. There seemed to be a sort of electric repulsion between the atmosphere and the earth, so that they could not work together; but after this partial thaw, a severe thunder storm, extending over many parts of England, occurred on the morning of the 3d instant. Unless in damage to a few steeples, this thunder storm, which was as violent as unexpected, appears to have done no harm whatever, but, on the contrary, to have opened a free communication between the heavens and the earth. The first effect was in excessive cold, increasing in intensity every day until the 7th, when in some of the low lying places, though there was little or no wind, the thermometer stood at zero nearly all the day long. On this day a very unusual phenomenon presented itself. A gentleman gardener, in lifting some trees which had lain felled on the ground for some months, observed under them a full-sized toad as awake and lively as though it had been in the dog days. Soon after this the frost partially gave way, and there were alternate freezing during the night and thawing during the day. On the Saturday week after the severest frosty day, a lady observed some animal in the lane before her, getting on with ungainly steps, and with its eyes glaring very brilliantly in the reflected light. Upon examining this animal, she found it also was a toad; and it appeared to be making its escape from a nest which the rain had flooded, to any more dry situation which it might be able to find. These simple facts are not unworthy the notice of naturalists, as we believe they run counter to some of their favourite theories. That what we have stated are facts, however, there is not the least reason to doubt.

When, a few days after this, the original snow and ice had wholly disappeared, it was found that, wherever the snowy covering had been laid, and it was pretty general, not the most delicate flower or culinary vegetable had sustained the slightest injury. Their appearance was far superior to what it would have been had they been covered with mats, straw, litter, or any substance warmer than snow. We shall not, however, enter more largely at present into the effect of snow upon growing vegetables; but shall reserve it for a general article we purpose to write on that subject. Since then there have been alternate falls of snow and rain, with tranquil and sunshine weather interspersed between; and if we may judge from present appearances, we should say that everything is in fair train for an early and favourable spring.



THE

FLORIST'S JOURNAL.

MARCH 1, 1841.

ZENOBIE.—PICOTTEE.

We have selected this beautiful specimen of one of the choicest florist's flowers, as the illustration for our present number. The flower is the property of Messrs. Youall, of the Yarmouth Nursery, Great Yarmouth, who have excellent and healthy plants of this variety, as well as many other choice ones, on sale, at moderate prices, considering the beauty of their flowers. They warrant them true to their variety, and not liable to run a brake, which are great matters in flowers so difficult to be kept to their colours as fine Carnations—Flakes, Bizarres, and Picottees.

THE CARNATION, DIANTHUS CARYOPHYLLUS.

This flower belongs to the class *Decandria*, and order *Dygynna*, of Linnæus, and to the natural order *Caryophylleæ*, though some botanists have doubts as to the origin being exactly the same as the Clove, to which the name more strictly applies. It is probable that we owe the Carnation to the same source to which we are indebted for many of the older ornaments of our gardens, viz. to the monks, who introduced flowers and fruits from Italy and other parts of the continent, superior to any that were previously known in England; and, by foreign instruction, they appear to have managed them in a manner superior to anything known to our cultivators at that period.

Wherever it originated, or by whomsoever it was introduced, the Carnation is a very old favourite, on account both of the richness and variety of its colours, and the exquisite pungency of its scent; and though other flowers have had their day, and gone into neglect, it is as great, and deservedly as great, a favourite, both with the professional gardener and the amateur, as ever it was. Some of our foremost cultivators, among whom we may name Mr. Hogg, of Paddington, as standing at the head of his particular department, have paid the most intimate, and, if we may say so, scientific attention to the culture of this flower, as well for the obtaining of new varieties as for the preservation and improvement of favourites already in the field. But although we mention Mr. Hogg as standing high in this department of the floricultural art, we are far from meaning to say that many others, in all parts of the country, do not breed very choice Carnations.

Carnations are usually divided into three classes—Flakes, Bizarres, and Picottees. The flakes have the colours in broad stripes, and seldom more than two; white being the ground colour, and the second colour any shade from deep purple to the palest pink of the peach blossom. Bazaars have usually more than two colours, variously broken into stripes; and the beauty of colour in them depends on the proportions of the different tints, and the manner in which these are blended and contrasted. Picottees are dotted, or marked over with little spots, besides the colours which they have in greater breadth; and a good deal of their beauty depends upon the tint and brilliancy of these dottings. It is difficult to say which of the three deserves the preference, for fine varieties of all are exceedingly beautiful. In addition to colour, the flower should be of ample size, the petals finely formed and arranged, and the grass or stem supporting the single flower, or the truss, or bunch, as it may be, strong, and of a healthy colour.

In growing Carnations to perfection, the first thing to be attended to is the soil in which they are grown. In all cases this must be an artificial compost, because there is no natural soil in this country exactly fit for growing fine Carnations; and if the soil is not a profitable one, all the rest of the labour of the cultivator is lost.

The first ingredient to be sought is a proper loam, which should be obtained from maiden ground; the top spit only to be taken, and the loam not to be so clayey as to adhere to the fingers, but to feel soft and oily, and have a pleasant smell. To make a proper compost, upon a pretty large scale, the component parts are:—one load of this loam, half the quantity of good black mould, two loads of thoroughly-rotted horse-dung from an old cucumber or melon bed, taking care that there is no mushroom spawn in it, and two large barrow loads of rather coarse sand, which has been thoroughly washed with water. If the loam is of a stiff nature, the quantity of sand must be increased. This is the rough compost; and it must be kept for a year, and frequently turned, especially during the frost, so that it shall be thoroughly mixed; but it must not be too much blanched by the rain. A little lime, mixed hot with the heap while turning it, is of service in destroying the larva of insects, which are very destructive to all the more delicate flowers.

The method of propagation is by seed, by pipings, or by layers; the first to obtain new varieties, and the others to preserve and multiply establishments. The time for taking the pipings or layers is when the plant has come into bloom, and before it is too far advanced; otherwise they will have become hard, and not strike quite so easily.

Carnations require pure air and free exposure to it, except at times when this would affect the colours of the blooms; and then the blooms must be protected by shades of glass or paper, but the grass left as freely exposed to the air as possible. If the propagation is by seed, it should be sown in April, and the seed covered with fine compost. When planted out in beds, where they are to remain to flower, they should be put ten inches apart, the bed being of the proper compost, and well prepared. Before the flower stem makes its appearance, the pots,—if the plants are in these,—should get a top dressing of rich compost, and water must be given during the growth of the stem and the swelling of the flower pod.

As the plants advance, care must be taken that the pods have no tendency to burst on one side. This may be prevented by gently tying with moist bast; or if it is obstinate, the opposite side of the pod may be slit with a sharp knife. At this time the side shoots should be taken off, and the blooms in the truss reduced to the number which the stem can properly bear. After farther advance, circular bits of card should be put round immediately under the flower, and the guard or lowest series of petals spread neatly upon these. Then paper caps, or small shades of glass, must be suspended over the flowers, to prevent the sun and rain from injuring the colours, and these should be removed towards evening to give a little air. When these precautions are taken, the blooms may be obtained in the greatest perfection that the plants will admit of. If they are to be bloomed in pots, these pots should be large, and the plants transferred to them early in April; after which, the treatment is the same as if they were in the open border. In winter they should be secured from very severe weather by hoops and mats, or some such contrivances; but still they should have as much of the free air as possible.

As the Carnation is grown by an almost countless number of florists, there are different modes of treatment recommended; but the notes we have given are in accordance with the practice of the most successful growers, and therefore we can recommend them as containing nothing visionary.

ON THE CULTIVATION OF CORYANTHES.

BY MR. DON.

As the best mode of treatment for this beautiful and singular genus, I should recommend their being grown in pots rather than in baskets. When the plants have got about six or eight pseudo bulbs, they should then be removed into very large pots; the pots should be filled up to within a few inches of the top with very large potsherds, and over them should be laid the roots of the pteris, or eagle fern, cut into lengths: then commence to build the mound, which should be raised about five inches above the rim of the pot. The mound should narrow a little towards the top, and on that should be placed the plant; and when this is done, the mound should be pressed as firm as possible, and finished off neatly, some pegs being put in for the purpose of holding the mound together. The pot in which this genus is grown, should be of the most fibrous nature possible. The season for potting should be either March or April; and as soon as the plants are potted, they should be put into the growing house, where they should have plenty of heat and moisture, till towards the latter end of September, when they should be removed into the cool and dry house, and have air every fine day, as that will harden and prepare the pseudo bulbs for flowering and growing with more vigour the following season. One great reason why this tribe of plants has never been flowered to perfection is, that they have all along been kept in the house in which they have been growing, and very often with the same heat and moisture as they had in their season of growth, so that the plants were always kept in a spongy state; and thus they never could form flowering buds,—or if they did, these were often rotted off, or so much weakened, that they never could come to perfection. In their native country, after their season of growth is over, then follows a rather cool and very dry season, which ripens the sound or pseudo bulbs. This season is then followed by a third, which is their flowering season; the temperature is warmer than that of the resting season, and the dews are more frequent and more copious. It will be seen at once that the mode of treatment for all Orchidacæ is that, in their season of growth, they should have plenty of heat and moisture, and very little air; and in their season of rest, they should have no moisture, and abundance of air when the weather is fine, as that hardens and prepares the plants for flowering and growing with more vigour.

The number of species in this genus is very few at present; but it is a truly natural genus in its habit and its flowers. I shall enumerate the known species, which are as follow.

Coryanthes macrantha.—A native of Brazil. This is truly a magnificent species; the flowers are very large: the sepals and petals are beautifully spotted; and the lip and column have very much the appearance of a small helmet. When the flowers are fully expanded, the sepals and petals are thrown back, and have something the appearance of the wings of a bat, and leave the lip and column exposed. The column has two horns at the base, out of which comes a clear insipid fluid, that falls into the lip, which is formed like a cup; and when it is full, the column separates from the lip, and the fluid runs out; and when it is all out, the column then gets into its place again; and then it fills again, and so on for three or four times, till the flower is completely exhausted and dies. The flower is of a very short duration; but if the plant is in a strong healthy state, it will have a number of spikes, with two to three flowers on a spike. The pseudo bulbs are round, and many-angled, very thick at the base, and tapering towards the top. The leaves are two on each pseudo bulb; they are lance-shaped, pointed, and of a pale-green colour. It is readily known from the other species by its much shorter bulb, and broader and shortened leaves. The flower spikes are pendent, as in all the species.

Coryanthes speciosus.—This is a very pretty and distinct species. The flowers are very much smaller than the preceding species, and of a different colour, they being all of one dingy yellow. The sepals and petals are thrown back much in the same manner as the other; but the pseudo bulbs are very much longer than that of Macrantha, and taper much more: the leaves are two to each pseudo bulb, long and narrow, and very much pointed; the flowers are three to four on a spike; the spikes come out from the base of the pseudo bulb, and are pendent, which gives the plant a handsome appearance when in flower.

Coryanthes maculata are elegant species. The whole flower is spotted in the same manner as that of the first species. The flowers are very much like those of Macrantha, but much smaller, and it has the pseudo bulbs and leaves of Speciosus; they are not easily distinguished from one another when they are not in flower. There is another species very like this, having the habit of this species, but differing very much in the marking of the flowers; it is a species not yet named, but it is a beautiful species. These are all the species belonging to this genus which at present are known.

It will be necessary to say something about shading, as the season is now fast advancing. The only thing which I should recommend for shading is that of coarse canvass, being much better than any thing else that I know of: it admits the light much better than any thing else, and at the same time breaks the rays of the sun. I should not, as is the custom, take off the canvass at night, as taking off the canvass at four o'clock in the afternoon, I should generally say, admits too great a flood of light at that late period in the afternoon. In their native country, it is well known, the day is only about twelve hours long; while in this country, in the summer, it is much longer, and consequently, I should say, it is necessary that the rays of light should be partly excluded after six in the evening,—this means rendering the days as nearly equal to the tropical day as possible, for we generally find tropical plants succeed better when the days are nearly equal, that is, when we have twelve hours day and twelve hours night. Another evil arises when the shading is taken off at night—the air in the house becomes very dry: but when the canvass is left on, the moisture in the house condenses upon the plants in the form of dew, which strengthens them very much, and makes them more vigorous, and more able to stand the intense light of the succeeding day. It is pretty well known that most plants are in great part composed of carbon, and that is chiefly generated at night, or on dull days, but for the most part at night. It will at once be seen that, when the day commences at one in the morning, and ends at ten at night, they then have but little time to imbibe carbon, which is their principal food; they must, therefore, be taking in oxygen, which completely exhausts them, and renders them feeble, and unable to perform their functions. As plants, for the most part, grow more at night than they do throughout the day, it is necessary, therefore, to let the houses go cool throughout the night, but not by the foolish system of admitting air in the growing-house. In the resting-house that is of no consequence, especially in the summer season.

P. N. DON.

TOOTING NURSERY,
Feb. 17*th*, 1841.

FLOWER GARDENS.

LAYING out flower gardens, that is, fixing the boundaries and arranging the beds and borders,—grouping the trees, shrubs, and herbaceous plants,—together with tracing the walks and disposing the buildings, ornaments, or other features,—requires as much taste and judgment as is required in the cultivation of the plants.

We have all read of the elaborately-designed flower gardens of Italy, France, and Holland, during the sixteenth and seventeenth centuries. Right lines, right angles, and regular geometrical figures, then prevailed; and lest these should not be complicated enough, all kinds of fret and scroll work were imitated on smooth turf, or on a surface of gravel, therein forming beds of the most tortuous and whimsical character. This style was introduced into the royal and many noblemen's gardens in Britain, but almost entirely disappeared soon after the commencement of the last century. This was succeeded by a new scheme, the leading character of which consisted in irregular dispositions, and indiscriminate intermixture of trees, shrubs, and herbs, arranged without order in clumps and groups, bounded by waving lines. This new fashion of irregular planting was not only adopted in flower gardens and pleasure grounds,—it was transferred to the park also; and in this style the greater number of the country seats in this country appear at this day; and although it has been the reigning taste for above this hundred years past, it has not escaped censure. The accurately-cut edges of the walks and clumps, were said to be hard and too obtrusive, making the line between the plants and turf too distinct. Box edgings were equally objectionable, as they formed no softened intermediate link between the turf or gravel and the trees. These defects were partly done away with, by giving up digging the clumps, and allowing the turf to flow in among, and be lost under, the plants. The edges of the walks, too, were beaten down almost level with the gravel, which took off from the ditch-like appearance of the walks.

Professional men, and among others, Mr. Loudon, have shown themselves indefatigable in carrying on a history of landscape gardening,—describing its changes, recording the merits of the various styles, as well as pointing out their defects, with the laudable view of defining the taste, and fixing the execution upon something like sound principles. With respect to flower gardens, Mr. Loudon even recommends the old French style, in certain situations,—that is, where the flower-plots are *looked down* upon from a terrace above; because if plots are designed and displayed in very elegant forms, and regularly disposed with respect to each other, their elegance of design and variety of outline are lost, unless seen from an elevated station. And all this, he thinks, is perfectly consistent, because a flower garden, being a confessedly *artificial* creation, every device, every mark of art is admissible, in order to interest and enhance the beauty of the scene.

On level grounds, or that which is nearly so, Mr. L. has, in one of the late numbers of the "Gardeners' Magazine," advised to *keep up* the artistical character of a flower-garden, by disposing all the plants in circular beds, each of these containing a group of one species or family; and to give variety, making the circles of different sizes, varying from eighteen inches to six feet in diameter; and as another source of variety, placing the circles singly, or in larger or smaller masses or *constellations*, as he calls them. In one place a large circle may be surrounded by several small ones: or, where a thicket may be required, two or three large circles may be irregularly fringed, with a number of various sized ones, always observing that no two circles be nearer together than two feet. As these circles may be variously disposed on the turf, there would be no sameness in the composition, and much variety, both of form and foliage, would be the result. If squares were used instead of circles, more variety might be given; but as angles cannot be so well concealed by planting, the curving outline of circles are to be preferred.

As the tallest growing plants would always occupy the centres of the circles, and the others according to their stature would be graduated down to the peripheries, the whole might be supposed to appear like an assemblage of distinct tufts or cones of foliage. But this would be no more offensive to the eye than what is commonly called a *hanging wood*, which is universally admired in sylvan scenery, from the numerous catching lights reflected from such a surface.

The adoption of this style, for giving pleasing features to a flower-garden, affords facilities to the flower-gardener for grouping his plants, and in choosing just such sized beds as will contain his stock of plants, whether perennials, biennials, or annuals. Single trees of the most ornamental character may occupy the centres of some of the larger circles; and these may be accompanied by shrubs of similar foliage and hue: and from the diversity of tints and manner of leafing of the different groups, if judiciously associated or dissociated by the planter, much of the beauty of the garden will arise.

A full breadth of lawn in due proportion to the area of the garden should be preserved, and which, from the shape of the beds, would have an exceedingly varied outline, advancing or receding from the eye, from whatever point it may be viewed.

Gardens, which have been laid out in this manner, it is said, have a very fine effect; and though recommended by Mr. L. for flower-gardens, he guards himself against it being supposed that he would recommend the same style in planting a park, lest it should cause the reintroduction of the odious feature of *round clumps*, which disfigure so many of our modern parks, and which have been deservedly condemned.

This style of planting in circles being the *newest* idea and advice offered on the subject, it is fit that the readers of this Journal should be apprised of the same.

Chelsea,
February 17, 1841.

NEW AND CHOICE FLOWERS AND ORNAMENTAL PLANTS ON SALE.

We resume this department of our Journal; but owing to the great length of some of the original articles, we must, for the present month at least, confine it to rather narrow limits.

MR. CATLEUGH, OF HANS-STREET, SLOANE-STREET, CHELSEA,

Has a choice collection of Geraniums (Pelargoniums,) Calceolarias, Heartsease, Chrysanthemums, Verbenas, Fuchsias, Picottees, and Auriculas, many of which are of the most improved sorts, and raised by the most approved breeders, especially what may be called amateur breeders. And here we may, in passing, remark, that amateurs who have the requisite capital, facilities, and spirit, may render vast service to the floral art by obtaining new and choice varieties, and distributing them to the trade for propagation, and the supply of the public. We feel convinced that an amateur may do much more in this way than is in the power of nurserymen, generally speaking. The trade of breeding plants, though it has been greatly improved, and is now improving rapidly every day, has not yet arrived at that stage in which the division of labour can be applied to it in the most efficient manner. The nurseryman who supplies the public must have a variety; and that variety must consist, in almost every case, of plants which require very different modes of treatment. The amateur, on the other hand, can concentrate his whole energy upon his particular favourite; and as he works for pleasure rather than for profit, he can carry his experiments farther than would be prudent on the part of most nurserymen. When such an amateur succeeds in obtaining a new beauty, he has all the glory of it, at the exhibitions or otherwise; and in addition to this, he has the farther glory of making it a boon to that public, the applause of which is the real stimulus to his labours, whether he himself is aware of it, or no. But to return to Mr. Catleugh's collection.

Of choice Pelargoniums he has 103 varieties, seventy-two of which are grown by the Rev. R. Garth, by E. Foster, Esq., and by A. Bainbridge, Esq.; and in addition to these he has fifty-two named varieties, of good quality; but older, and consequently cheaper.

Of Calceolarias, some herbaceous and others shrubby, he has more than sixty choice varieties raised by Mr. Green, (our esteemed correspondent,) and by Messrs. Forster, Alstone, Barnes, and Willmore. Among these there are many first-rate beauties of this choice and fashionable flower; and in addition to these, he has many of the older sorts at very reasonable prices. Mr. Green's seedlings of 1840, will be ready for sending out in April, and we shall give due notice of them.

The Heartseases are numerous, varied, and choice; and among the rest are six choice seedlings, raised at Uxbridge, and obtainable only from Mr. Catleugh. These are White Perfection, British Queen, Vanguard, Miracle, Victory, and Perfecta. The Chrysanthemums, Verbenas, and others, are well worthy the attention of florists; and we can assure them that every plant sent out by Mr. Catleugh is true to its name, and in excellent growing condition.

ON MOISTURE.

TO THE EDITOR OF THE FLORIST'S JOURNAL.

Sir,—*Your late remarks on the weather as affecting vegetation,* and your account of how an abundance, or paucity of moisture in the soil expedites or retards the growth, are all very satisfactory. Every observer of vegetable development, during the past summer, must agree with you, in accounting for the early shedding of the foliage, as being a consequence of the want of sufficient moisture in the ground in the season alluded to. This circumstance, by the by, is a proof that the summer shoots are well ripened; and it is a kind of earnest of a plentiful crop, at least a plentiful flowering, next season.

But, besides the moisture of the soil, so necessary to every plant, there is another agent which equally affects them, though often overlooked, or not regarded by the cultivator. This is the stream of subterranean heat, which is ever rising through the surface strata of the earth. That there is such a source of heat independent of that of the sun, and also a source of moisture independent entirely of that of rain, is incontestible. These together excite and support vegetation, when their united agency is totally unheeded. Indeed the existence of heat, independent of that of the sun, is by many people considered perfectly chimerical; and so far have these doubts been carried, that, to make up for the want of heat in the soil, grape-vine borders have been formed and artificially heated by fire-flues; the inventors conceiving that the roots require the same temperature as that in which the branches are kept. But this no where obtains in nature, as the stratum of earth in which the roots have their range is of pretty equal temperature at all times in the year, and nearly over every part of the earth's surface. On the sands of Arabia there may, indeed, be something like an approximation; but there vegetation, if any, is dormant.

But in this country it is very natural to suppose, that in the case of winter forcing, the roots and branches of a vine are very unequally situated; the latter being in a heat of 60 or 70 degrees of Fahrenheit, while the former are in about 42. But this is no greater disparity than is perfectly natural to the parts respectively. For, whatever temperature the branches may be exposed to, the fibres of the roots, from their extreme delicacy, require a much lower degree; being equally averse to light, dry air, and extreme heat. Burning the roots is a frequent misfortune, both in hot-beds and hothouses; and therefore it would appear that artificially-heated borders for trees is an unnecessary provision; and *in all cases, if the bottom of the border be sufficiently porous, the* supply of subterranean heat will always be adequate to the wants of the working roots.

That the deeper we pierce into the crust of the earth, the higher the temperature, is well known to miners, well-diggers, and even to the observant husbandman, who employs his sub-soil plough; to the planter who trenches; and even to our friends the florists, who invariably trench or break up deeply the natural bottom of their beds before laying on the surface compost. The good effects of so doing is known to every practical man. But the effects are not always attributed to the right cause; some declaring that it is because the roots have more scope; others, that opening the ground so deeply admits more readily all atmospheric influences;—both ideas being just as auxiliaries; but the main and principal effect is giving facility to the ascending stream of humid heat from the interior of the earth.

That such phenomenon is constantly in operation, is very visible at this time of the year (18th Dec.), if we only look at the gratings over drains, the mouths of pits or wells, or remark the temperature of the water flowing from artesian wells. The snow upon newly trenched ground disappears sooner than it does upon the firm surface around; and it has often been observed, that snow is faster thawed by heat radiating from the earth, than from a milder change in the atmosphere. In a thaw, any solid body—as rocks, large stones, foundations of old buildings, or pieces of timber embedded under the surface—may easily be discovered by the snow lying longer over them than it does on the surrounding surface, free from such obstructions.

Ice-houses are warmer than the open air, and on this account they must be bad receptacles for preserving ice; and so those which are sunk deep in the ground are far less useful for their purpose than ice-houses built on the surface. But it is necessary to notice that it is not the heat of the place which dissolves ice; it is the impact and circulation of fresh air which so rapidly destroys the crystalization; and therefore an *air-tight* building is far more efficient than one made deep in the earth. Turf walls and a thick conical roof of thatch make the best ice-houses.

It is probable that the subterranean heat might be available for some domestic purposes. For instance, if the lower ends of the discharging pipes from the gutters of a roof were let into deep cesspools in the ground, a current of warm air would be ever ascending up the pipe, and prevent the same from being frozen over at the top. And so a small greenhouse, if connected with a deep pit by a flue passing from the one to the other, might repel any extra degree of frost dangerous to the plants; and perhaps some other advantages may be gained in gardening, by obtaining accumulations of this latent heat. But, as already said, deep trenching of beds and borders, and breaking through an impervious sub-soil, is the easiest practical expedient for affording to plants the excitement of terrestrial radiation.

OBSERVER.

ON THE DESTRUCTION OF INSECTS.

BY JAMES MAIN, F.L.S.

FLORICULTURE, like every other branch of gardening, has its drawbacks, not only from accidents of wind or other weather, but from invisible enemies, which harbour in the soil, crawl on its surface, or fly in the air. Roots, whether fibrous, tuberous, or bulbous, are preyed on by insects, or the larvæ of insects, which live in the ground. The stems and leaves are disfigured by slugs and snails; and even the flowers, just ready to burst into beauty and fragrance, are utterly destroyed by night-feeding insects.

Every tulip grower has suffered more or less from the ravages of the wire-worm, the larva of a kind of beetle belonging to the genus *Elater* of entomologists: the perfect insect is frequently seen during summer, in gardens and fields, on the ground, or resting on the leaves of plants. It is of a dirty grey colour, rather better than half an inch in length, and rather narrow in proportion to its length. When disturbed, or taken into one's hand, they feign death, and will remain motionless for a minute or two; and their attempt to escape is by a sudden leap into the air, by some muscular power exerted between the thorax and abdomen. The larvæ are yellow, with a brown head, and about three quarters of an inch in length: they are remarkably tough, and hence their provincial name.

They are mostly brought into the beds of the flower garden among the finest loam employed for enriching the beds, and for forming suitable composts for the flowers. They devour almost any root that falls in their way, particularly tulips; and often destroy some of the most valuable bulbs. The best remedy is to bury pieces of turnips or potatoes in the bed; and these being attractive to the worm, and examined from time to time, the depredators may be captured and killed.

The earwig is a great enemy of the florist: they feed by night, so that they are not detected unless sought for by candle-light. Some time after the *Schyzanthus porrigens* was introduced into this country, the plants were observed to be sadly mauled by some insect, which stripped them of their parenchymatous bark during the night. A botanist, whose plants had suffered in this way, was resolved to detect the depredators; and, taking his lantern, repaired at midnight to the border; and there he found half a dozen "peelers," or more, on every plant. Searching for them by day, he found them concealed under the leaves of neighbouring plants, but so numerous as to make the capture of the whole impossible.

The earwig is also a constant plague to the pink, carnation, and dahlia grower: and furnishing them with dry receptacles, such as lobsters' claws, old shoes stuffed with hay, or small flower-pots, placed on the top of the props, for them to retire to on days, is perhaps the best plan for taking them. This is alluring them by *sympathy*, which, with such hardy insects, is more effectual than driving them by *antipathy*, as no harmless application to the plants can kill or offend the mail-covered earwig. Flower-stands are sometimes set in pans of water, to prevent the approach of creeping insects; and this is a defence against full-grown earwigs, because when old they never use their wings; but against young earwigs it is no defence, because they fly by night as well as any other winged insect.

There are many others of the beetle tribe of insects injurious to the florist, both without and within doors. The green fly,—the red acarus, or spider, as it is commonly called,—and the thrip, are all destructive to the beauty of exotic plants, particularly in the stove; but for the two last an efficient remedy has been found and employed by Mr. Knight, of the King's-road, Chelsea. This able cultivator of all the rarest exotics, after trying various expedients for banishing the red spider from his hot-houses, thought of a plan which effectually clears the plants from dust, as well as insects. He makes a solution of glue in warm water, in a large tub; and when sufficiently diluted by additions of warm water, and while yet hot, the whole infested plant is plunged in the liquid, and immediately returned to their place in the house. Thus a thin coat of the solution remains on every part of the plant, incasing every insect in a vestment, in which they can neither breathe, eat, nor move. The vestment hardens as it cools; and after a day or two, it cracks and peels off the plant, bringing with it every insect which it involved.

This dipping, it will be observed, can only be performed on portable plants, or such as occupy pots or boxes not heavier than what two men can carry in their arms. On large specimens, as orange trees and the like, the solution must be thrown on with a syringe, or applied with a soft brush.

The idea of encumbering insects on plants, so as to prevent their motions, or hampering them in any glutinous mass, is an excellent plan. One of the first orchardists of the age recommends soft soap, diluted in warm water, to be applied with a brush upon apple-trees, infested with the woolly aphis, or American blight; for this not only clogs and kills the old ones, but prevents all migration of the young. A band of any glutinous fluid, applied round the edge of a pot, or round the stem of a plant, prevents all approach to the head by creeping insects.

Queen's Elms, Nov. 20.

RIPENING OF THE AURANTIA.

In reply to the query, respecting the ripening in Britain of the lemon and the orange, we have to say that fruits of this description do come to some sort of maturity in this country,—that is, they grow to a certain size, cease to grow, and then decay; and the pulp which is in them is acid; but neither rind nor pulp resemble those of the fruits of more southern and congenial climates. The rind is thin and leathery, and almost destitute of that essential oil, to which the fruits owe their particular odour. Then, in the pulp, the aroma or flavour is almost entirely wanting, and the taste is merely an acid, and that not of the most agreeable kind.

This holds true of the oranges grown in France, as well as those of Britain; and thus, though the Aurantia are not, strictly speaking, tropical fruits, they cannot be grown beyond certain latitudes, or except where the air is of a peculiar character.

We grow the pine apple in our stoves to as high perfection as it can be grown in its native localities; and as this is a more tropical fruit than any of the orange tribe, some may wonder why it comes to greater perfection. The reason is, however, obvious: the pine apple is a plant which loves heat and a rank atmosphere; whereas the orange tribe come to perfection only in the purest breezes which heaven can blow. Therefore, though shelter and artificial heat may keep them alive, make them grow vigorously, and bear flowers and fruit, they cannot give the flavour. That must be the work of nature, and can be obtained only by the operation of natural causes, which no art of man can imitate. It is the same with the highly aromatic spices, and with the peculiar odour of some flowers. It is in fact a very peculiar climatal adaptation, and one to which we may have again to revert on a more extensive scale. In the mean time, we hope we have said enough to satisfy our inquirer.

to give high colour to the flowers. This rich layer is to be covered with a compost (described above) to receive the plants; these being put in at equal distances of about eight inches apart.

In dry weather they will require frequent watering, and especially if attacked by a species of Acarus, commonly called red spider, which is very prejudicial to them. These little insects are not so easily driven from the Polyanthus as they are from some other trees and plants, because they can secrete themselves in the under cavities of the leaves, to which water cannot be easily introduced. Two or three applications of tobacco water, thrown forcibly on with a garden syringe, while the lower leaves are held up, is one means of ridding the plants of them; but this will require to be repeated very often in dry weather. Slugs, snails, and earth-worms, should be banished with lime water.

The very choice sorts, when in flower, should have the shelter of a hand-glass, to preserve their beauty as long as possible. Except those intended to ripen their seed, all should have their flower stems cut away as soon as the flowers have faded. Being prolific bearers of seed, its production receives a great portion of the strength of the plant; consequently, the shoots and flowers for the next year are diminutive; which would not be the case, if prevented from perfecting seed.

Description of a fine Polyanthus.—" Its properties are in most respects similar to those of a fine Auricula, viz. the stem, pedicles, and formation of the truss; therefore a definition of its florets and petals are only necessary to be considered in this place.

" The tube of the corolla should be short, well filled with anthers, and terminate fluted, rather above the eye.

" The eye should be round, of a bright clear yellow, and distinct from the ground colour: the proportion, as in the Auricula, throughout the flower.

" The ground colour is most admired when shaded with a light and dark rich crimson, resembling velvet, with one mark or stripe in the centre of each division of the corolla, bold and distinct from the edging down to the eye, where it should terminate in a fine point.

" The florets should be large, quite flat, and as round as is consistent with their peculiar, beautiful figure, which is circular, excepting those small indentures between each division of the corolla.

"The edging should resemble a bright gold lace, bold, clear, and well defined, and so nearly of the same colour as the eye and stripes, as scarcely to be distinguished."—MADD.

There are many curious, improved varieties of the primrose; such as the different-coloured double ones, which are well worth cultivation. Of species, a few have been lately added to British collections, particularly a very showy one, *Primula sinensis*, from China, which is at present a great favourite. As this is a pretty hardy, free-growing plant, there is no doubt that, by high cultivation in highly compounded soils, it may assume all the diversity of form and colour so remarkable in its congener of European origin.

LIST OF BEST VARIETIES:—

Allen's Favourite.
Billington's Beauty.
Brooke's Duke of York.
Brown's King.
Darlington's Defiance.
Eckerley's Black and Gold.
Hardman's ditto, ditto.
———— Ranting Widow.
Park's Lord Nelson.
Pearson's Alexander.
Smith's Lady Nelson.
Stretch's King.
Tate's Prince Regent.
Thomas's Nelson.
Thompson's Lord Nelson.
Thorpe's Golden Fleece.
Turner's Prince of Wales.
———— Princess of Wales.
Yorkshire Prince Regent.

Main's Florist Directory.

NOTES ON FLOWERS.

Violet.—This sweet little flower is an universal favourite. The odorata and its varieties are most valued; but they cannot be had in perfection unless a good deal of pains is bestowed on them. Slugs are very destructive to the violet, devouring the flowers as much before as after they are in bloom. Where the flowers are in much request, beds are made on purpose for them, composed of a layer of coal-ashes on the bottom, covered with a compost of peat-earth, loam, rotted cow-dung, and sand ten inches thick. On this young runners are planted, six inches apart, in July, carefully attended; and, when the cold of autumn sets in, they are covered with a frame and lights, and defended from the frost throughout the winter. Violets should be potted in August for forcing, which is most successfully done in a mild hot-bed. The double Neapolitan is the best for forcing.—*Main.*

Chrysanthemum.—This is only a half-hardy border plant—requires to be kept in pots, and nursed in a frame or house to get it to flower before frost sets in. They are propagated by slips taken off in March, by cuttings in May, or by layers in August. The first make tall and strong plants, but the last make the most handsome and bushy. Large flowers are obtained by thinning the flower-buds, *i. e.* all the secondary buds are pruned off. Such as flower in a cluster should be thinned more sparingly; the Superb Cluster Yellow, for instance, should be allowed to show its character.—*Gardener's Magazine.*

Dahlia.—This is one of our most splendid autumnal flowers. There seems to be no end to varieties obtainable from seed; and their cultivation is as easy as it is generally known. The seed, sown early in spring, will flower in the end of summer. The tubers must be taken out of the open ground in the autumn, and kept in a dry place out of the reach of frost in winter. In the early spring, the tubers of the favourite kinds are divided, and put into pots six inches diameter, and kept in a house or frame till all danger from frost is over, when they may be turned out in the borders. They are readily and expeditiously propagated, by taking the first shoots which rise from the tubers and striking them in a little heat. Such young plants produce the handsomest flowers. They flower earlier, and grow more dwarfish in the poorest soil; and if very large flowers are desired, all the inferior branchlets must be thinned out.—*Main.*

BOX EDGINGS.

The Box is at once the most efficient of all possible things, and the prettiest plant that can possibly be conceived. The colour and form of its leaf; its docility as to height, width, and shape; the compactness of its little branches; its great durability as a plant; its thriving in all sorts of soils, and in all sorts of aspects; its freshness under the hottest sun, and its defiance of all shade and drip;—these are beauties and qualities, which, for ages upon ages, have marked it out as the chosen plant for this very important purpose. The box, to all its other excellent qualities, adds that of facility of propagation. You take up the plants when they are from three to six inches high, when they have great numbers of shoots coming from the same stem: you strip these shoots off, put them into the ground, to about the depth of two inches, or a little more; fasten them well there, first with the hand, and then with the foot; clip them along at the top to within about two inches of the ground,—and you have a Box-edging at once.

To plant the Box some care must be taken. The edging ought to be planted as soon as the gravel walks are formed. The box ought to be placed perpendicularly, and in a very straight line close to the gravel, and with no earth at all between it and the gravel. It ought to stand, when planted and cut off, about four inches high; and the earth in the borders or plats ought to be pushed back a little, and kept back for the first year, to prevent it from being washed over the walks. When the edging arrives at its proper height, it will stand about seven inches high on the gravel side, and will be about three inches higher than the earth in the border, and will act like a little wall to keep the earth out of the walks, which, to say nothing of the difference in the look, it will do as effectually as brick or boards, or any thing else, however solid. The edging ought to be clipped in the winter, or very early in the spring, on both the sides and at the top: a line ought to be used to regulate the movement of the shears. It ought to be clipped again, in the same manner, just about Midsummer; and if there be a more neat and beautiful thing than this in the world, all I can say is, that I never saw that thing.—*English Gardener.*

NEW STANHOPEA.

SIR,—There is a new *Stanhopea*, that has just flowered. I wish to have it published along with the rest, so as to render the list as complete as possible.

Stanhopea aurea, golden Stanhopea.—The sepals and petals are yellow and spotted; the lip is of the most intense golden colour, with two dark spots, which is almost lost in the flood of yellow that surrounds them. The flowers are almost the size of *Stanhopea insignis*, and the form of *St. venusta;* the leaves are long and broad; the flower spike is about two feet long, and has about fourteen to sixteen flowers upon it, and has a most agreeable smell: it is one of the most beautiful of the genus.

P. N. DON.

THE WEATHER FOR FEBRUARY.

The month set in with the same intense but steady frost which prevailed in the latter part of January. The atmosphere was uncommonly tranquil for the season, and showed that nature was still in a state of winter repose, and that there was little reciprocal action between the earth and the sky. The temperature was low, considering that there was no wind to occasion surface cold,—being often 25 deg. or 24 in the streets of London at mid-day, and sometimes under 20 deg. during the night. There was, however, much less daily variation of temperature than there usually is in February, even though the weather is severe, if it is not steady. The surface of the ground was completely sealed up, and impenetrable to heat or to cold, either from above or from below. This had the happiest effect upon such roots and flowers and plants as were in the ground; for the soil immediately under the frozen surface was not so saturated with humidity as that spiculæ of ice could feel their way downward, and hurt either the fibres or the root of the most delicate plant. Thus the heat which radiated from the interior of the earth being arrested by the frozen surface, and not meeting with any action to absorb, it accumulated, diffused itself through the soil in which the roots were situated, and kept these in a more wholesome state than if the weather had been open, and the temperature of the surface and the air immediately over it considerably above the freezing point.

This, with the snow which preceded, has tended to remove the injury which the soaking rains of autumn of 1839, and winter of 1839-40, had done to the general state of the ground, and thus produced all the beneficial effects which we have again and again said would result from such a winter, and restore nature to a wholesome tone.

About the 16th the frost gave way with very little fall of rain or other disturbance, and the temperature speedily rose to near or about 50 deg. This sudden elevation of temperature occasioned no disturbance, however; for as soon as the external frozen crust gave way, the atmosphere met with warm ground, and the two worked pleasantly together. In consequence of this, the flowering and other plants which are just beginning to make their appearance above the soil, look more healthy and vigorous than in the majority of years, or in any year when the weather is variable. If they meet with no check, we may confidently look for more healthy robust plants, and a finer bloom in all bed and border flowers, than in the average of seasons. Also, though we never can speak with certainty of the future in the case of the weather, the tranquil state of things leads us to presume that there will be less danger in this way than there is in ordinary seasons. Thus this spring, which has just set in, is a most promising one; and the prospect on every hand is abundance in quantity and excellence in quality. This applies to flowering and fruiting shrubs and trees as well as to herbaceous plants. The early and perfect ripening of the wood and maturity of the buds gives farther promise, especially to all those plants which have their shoot and flower buds somewhat advanced in the autumn, and preserved in hybernacula during the winter.

The contrast of the year with the preceding one is very striking; and the two afford a most useful lesson to those who study—as every florist and cultivator should study—the philosophy of the weather. By careful examination and comparison, they will not fail to discover that, if nature runs into any extreme, as it did into the extreme of humidity in the preceding season, there are involved, in that very extreme, the elements of bringing nature back again. This runs through the whole system; and for this reason, besides others, it is deserving of the most careful study, more especially by those who deal with natural subjects, and must work in accordance with the season.

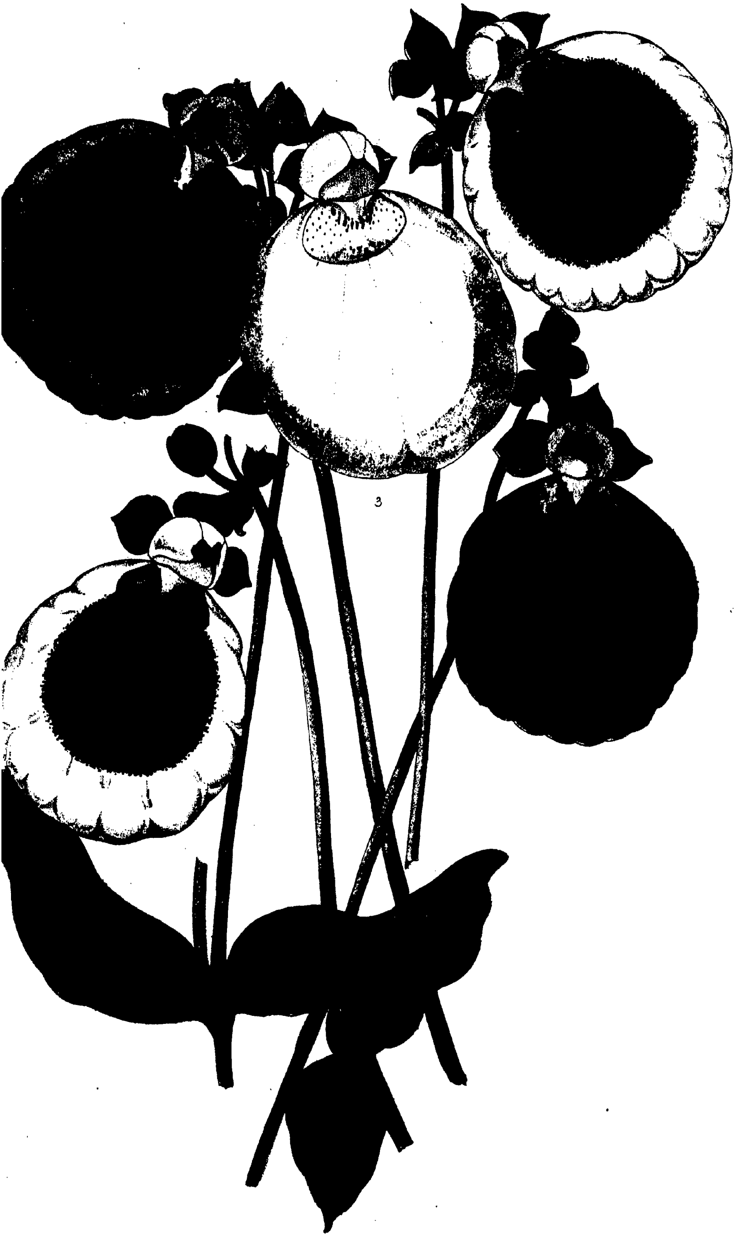
CALENDAR FOR MARCH.

STOVE.—Give water moderately, and air freely, during fine days. But little fire at night is now necessary; and to promote vigorous growth, shift your plants into rich compost.

GREENHOUSE.—Make no fires, unless the thermometer in the open air is within 5 deg. of the freezing point. Sow half-hardy annuals at the earliest period, and any tender annuals at the end of the month.

FLOWER GARDEN.

Sow hardy annuals, as Larkspur, Lupin, Mignionette, &c. at the beginning, and some of the more robust of the half-hardy, at the end of the month. Plant dried roots, as Anemone and Ranunculus, and most herbaceous plants; also Polyanthus, Sweetwilliams, Pinks, Auricula, Canterbury Bells, Gentian, Daisies, &c. Transplant annuals, and biennials and perennials to the borders. Shelter choice flowering plants; also Tulips, Hyacinths, &c., if the weather should be very severe. Clean and prepare the borders, and repair the gravel walks.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THE

FLORIST'S JOURNAL.

APRIL 1, 1841.

CALCEOLARIAS.

(WITH AN ENGRAVING.)*

THE blooms figured in our illustration are drawn from the several plants, by Mr. Holden; they are all seedlings, raised during the last year by Mr. JOHN GREEN, gardener to Sir Edmund Antrobus, Bart., at Lower Cheam, Surrey.

Mr. Green has named them,—No. 1, Prince Albert; No. 2, Preeminent; No. 3, Delight; No. 4, Miss Antrobus; No. 5, Model of Perfection. The first three are shrubby; Nos. 4 and 5 are herbaceous.

We understand Mr. Catleugh has most of Mr. Green's varieties on sale.

In our August and December Numbers of last year's Journal, Mr. Green has so fully described his method of culture of this elegant tribe of plants, that we consider no farther remarks on the subject are necessary at present.

ON THE CULTIVATION OF ONCIDIUM.

BY MR. P. N. DON.

This is a most extensive genus, eminently worthy the attention of the cultivator, and including many singular and beautiful species.

The mode which I should recommend for its successful cultivation is that the greater portion of the species be grown in large pots, filled up to within about two inches of the top with pieces of bark and potsherds; and over the potsherds should be laid about one inch thick of the roots of the common eagle-fern, and then pieces of bark and very turfy peat, till the pot is filled up about two inches above the rim. Then place the plant in the centre, and finish it neatly off with the fibrous turf. The best time to pot this genus is when the plants commence making roots; for if they are potted before that time, or after they have made their roots, they are apt to shrivel, and will sometimes damp off, unless great care is taken in giving them water; but, when potted as I have recommended, there is not the slightest fear of their either damping or shrivelling. When the plants are potted and finished off, they then should be placed in the coolest end of the house where they are to grow, and no water should be given to them for some time after; and they then should be given but a small portion at first, and increased as the plants get stronger and able to bear more. The moisture of the house will be quite enough for them till such time as they have made pretty good progress. This tribe of plants is not fond of being often disturbed; for if they are, they will not flower so fine nor so often as if they were left undisturbed. Great care should be taken not to allow any water to get into the hearts of the young shoots, or that will be sure to destroy them. Great care also should be taken that they are not placed under any drip, for that is certain death to them. When the plants have finished their growth they should be removed out of the growing house into the cool and dry house, and remain there till they show either signs of growing or flowering. They, of course, should then be removed into the growing house without delay: little or no water should be given to them for three or four weeks after they are taken into the growing house, as the moisture of the house will be quite sufficient for them. If plants of this description have not a season of rest, they become so weak that their growth the following season is small, their flower-stems weak, and their flowers small; but when they have completed their growth and then removed into the cool house, as I have recommended, and allowed to remain there till such time as they show signs of growth, the growth which they make after this is very fine—their flowers are large, and their flower-stems are strong and vigorous.

There are many of the species that are so small, that it would not do to put them into large pots. Some of the smaller ones do best on logs of wood, while others will do best in small pots, potted in the manner recommended for the larger species. All the species of this genus are fond of a moist heat; the moisture should be very great all the growing season; it should be at the point of saturation, and the house also frequently steamed at night, or rather in the afternoon, about four o'clock. This steaming should take place either from the water being put on the flues or on the pipes, as that will be more natural than the steam from a boiler, and it should be continued on for some time,—till such time as the plants are covered with dew; this will be much better for the plants than much water, as it will invigorate the leaves and pseudo-bulbs, and at the same time keep down insects.

ONCIDIUM CAVENDISHIANUM—is a beautiful species. The lip is of a fine yellow; with the sepals and petals green, and dotted with brown; the spike is large and very much branched; and the leaves are very large and boat-shaped. It is a native of the trees in Guatemala; introduced in 1836.

ONCIDIUM LANCEANUM—is the finest of all the genus. The lip is large, and of a fine bluish purple, with the sepals and petals orange, and spotted with dark purple; the spikes are large, and when the plant is finely grown, will produce as many as forty flowers on a spike. It is a native of Surinam, and was introduced in 1834.

ONCIDIUM CARTHAGENENSE—is a very pretty species, with sepals and petals green, spotted with dark-brown, and the lip of a dull green. The spikes of flowers are very long, and have a graceful appearance when the plant is well grown. This species is a native of the West Indies; introduced in 1791.

ONCIDIUM LURIDUM.—This species is very nearly allied to the last, only the lip is of a more lurid green, and the leaves are spotted, which is not the case with the last. The sepals and petals are green, spotted with brown. A native of Trinidad; introduced 1818.

ONCIDIUM GUTTATUM.—This is another very handsome species, with the sepals and petals orange, spotted with dark brown; while the lip is somewhat yellow, or rather a brownish yellow. The spikes are large, and very much branched. A native of Jamaica; introduced in 1837.

ONCIDIUM ROSEUM.—This is a very handsome species. The sepals and petals are light brown, spotted with dark; the lip is rose coloured; the flowers are small in proportion to the spike, which is rather large. A native of Mexico; introduced in 1838.

ONCIDIUM ALTISSIMUM.—This is a rather pretty species, with very large and branched spikes. The sepals and petals are green, spotted with brown; the lip is yellow. A native of the West Indies; introduced in 1793.

ONCIDIUM BAUERI.—This species is very nearly allied to *Altissimum,* but differs in the size of the flowers, and also in the size of the pseudo-bulbs, which are broader; and the leaves are more round at the point. The sepals and petals are green, spotted with brown; and the lip is bright yellow. A native of South America.

ONCIDIUM VARIEGATUM—is a neat little plant, with a small spike of flowers; the number of flowers on a spike usually from four to six; the sepals and petals are white, spotted with purple; and the lip is purely white. A native of Jamaica; introduced in 1825. This plant will only require a small pot to grow it in, or it will do very well on a log of wood.

ONCIDIUM PUBES.—A pretty species; with the sepals and petals brown, spotted with red; and the lip yellowish brown. A native of Brazil; introduced in 1824.

ONCIDIUM DIVARICATUM.—The leaves of this species are of a pale green colour; the sepals and petals are brown, spotted with red; the lip is yellow; the flower-spikes are long, slender, and very much branched; and the flowers are numerous on the spike. A native of Brazil; introduced in 1826.

ONCIDIUM PAPILIO.—This is the butterfly plant, the flower having a very great resemblance to a butterfly; the sepals look like horns or the antennæ of the insect, being long and slender; and the two side petals are like wings, and column forms the head portion of it. The stems on which the flowers are placed are very long and slender, and the least breath of air causes them to move, which resembles the insect on the wing. The sepals and petals are purple, spotted with orange; the lip is yellow, spotted with purple. A native of Trinidad; introduced in 1823.

ONCIDIUM ORNITHORHYNCHUM.—This is a very fine species; the spikes are pendulous, and the colour of the flowers purple, which give the plant a very handsome appearance; the flowers are small, but are crammed on the spike, and they are very aromatic. A native of Mexico; introduced in 1826.

ONCIDIUM AMPLIATUM.—This is a beautiful species. The sepals and petals are yellow, spotted with red; the lip yellow, without any spots; and the pseudo-bulbs are beautifully spotted. A native of South America.

ONCIDIUM HIANS.—A very pretty little species. The flowers are of a pale yellow, without any spots; and the leaves are of whitish-green, as if they were covered with a sort of white powder. A native of Brazil; introduced in 1837.

ONCIDIUM CRISPUM.—The sepals and petals are of a dark copper colour, spotted with a little yellow, and very much crisped; the lip is brown, and also crisped. A native of Brazil; introduced in 1831.

ONCIDIUM CORNIGERUM.—A very neat species, with the sepals and petals yellow, slightly spotted with brown; the lip is yellow. A native of Brazil; introduced in 1820.

ONCIDIUM LEMONIANUM—is a singular species; a native of Cuba. The flowers are yellow; the spike is slender, with very few flowers. Introduced in 1835.

ONCIDIUM BARBATUM (*bearded*).—A very scarce species, and very pretty, The flowers are yellow, with sepals and petals spotted with brown; and the lip is yellow. A native of South America, introduced in 1838.

ONCIDIUM FIMBRIATUM (*fringed*).—The sepals and petals are yellow, spotted with brown; the lip is yellow. A native of Brazil; introduced in 1837.

ONCIDIUM BIFOLIUM—is a splendid species. The flowers are large; the lip of a bright yellow; the sepals and petals of a pale yellow, with brown spots. It is best grown on a log of wood. A native of South America; introduced in 1811.

ONCIDIUM FLEXUOSUM.—This is another handsome species, and deserves well of the cultivator. The spikes are long, and the flowers numerous and handsome; and it is a very free flowerer. A native of Brazil; introduced in 1818.

ONCIDIUM CILIATUM.—A good species. The lip is yellow; and the sepals and petals are of a greenish-yellow, spotted with brown or purple. A native of Brazil.

ONCIDIUM PUMILUM.—This is a very curious species. The flowers are very numerous, but very small, and yellow. A native of Brazil; introduced in 1824.

ONCIDIUM CITRINUM (*citron*).—This is a very pretty species; but rather a difficult one to flower. The sepals and petals are yellow, with brown spots; the lip is yellow, or rather citron-coloured. A native of Trinidad; introduced in 1816.

ONCIDIUM PULCHELLUM.—This is an elegant species, and rather a scarce plant. The sepals and petals are orange, with brown spots; the lip is bluish; the spike is large when the plant is well grown. A native of Demerara; introduced in 1825.

ONCIDIUM STRAMINEUM.—The flowers are pale straw coloured, with a few spots of purple; it is rather a handsome species. A native of Vera Cruz; introduced in 1836.

ONCIDIUM UNICORNE.—A singular species, having on its lip a large horn. The flowers are of a pale yellow, with a few spots. A native of Brazil; introduced in 1837.

ONCIDIUM PULVINATUM, (*cushioned*).—The flowers are yellow, on long and very loose spikes; they are not large, but are rather pretty when the whole of the flowers are out. A native of Brazil; introduced in 1836.

ONCIDIUM LEUCOCHILUM, (*white-lipped*).—The sepals and petals are green, spotted with brown; the lip is pure white; the spike is long and handsome; the green sepals have a fine contrast with the white lip. A native of Mexico; introduced in 1835.

ONCIDIUM TRIQUETRUM, (*triangular-leaved*)—is another pretty little species, with the sepals and petals white mixed with red, also the lip is white mixed with red; it has from four to six flowers on a spike, which does not rise above two or three inches high. A native of Jamaica; introduced in 1793.

ONCIDIUM NUDUM, (*naked*).—This species is like Cebolleta in its habit, but differs very much in the form of its flower. The sepals and petals are yellow, spotted very much with brown; the lip is yellow. A native of Caraccas.

ONCIDIUM LUNATUM—is a singular species, being very different from all the other oncidiæ in its form. It has not much the appearance of an oncidium in its lip, which is formed in the shape of a moon, hence the name. The sepals and petals are orange, spotted with yellow; the lip is white. A native of Demerara; introduced in 1835.

ONCIDIUM HARRISONIANUM.—The flowers are numerous on the flower spike; the spike is rather slender and loose, and is somewhat pendant; it is a very graceful species. The sepals and petals yellow, spotted with purple; the lip is nearly of the same colour. A native of Brazil; introduced in 1830.

ONCIDIUM TETRAPETALUM, (*four-petaled*).—This is another neat little species. The sepals and petals are white, spotted; the lip is yellow. A native of Jamaica; introduced in 1824.

ONCIDIUM CEBOLLETA, (*awl-leaved*).—This in habit is not much like an oncidium,—it has all the characters belonging to oncidium in its flowers. The sepals and petals are yellow, spotted with brown; the lip is yellow; the spikes are long and loose; the flowers are rather large and handsome. A native of Carthagena; introduced in 1824.

ONCIDIUM REFLEXUM.—The flowers of this are yellow, and bent back. A native of Mexico; introduced in 1836.

ONCIDIUM DELTOIDEUM.—The lip of this species is formed like the Greek delta; the flowers are yellow; the sepals and petals are a little spotted with brown; the lip is yellow. It is, upon the whole, a handsome species. A native of Peru.

ONCIDIUM IRIDIFOLIUM, (*iris-leaved*).—A pretty little species, with leaves like an iris; the flowers are rather large and yellow; the spikes are small and few flowered, but it is very handsome. A native of Mexico; introduced in 1834.

ONCIDIUM RANIFERUM, (*frog-bearing*).—The knot on the lip has the appearance of a frog crouching or sitting still; the flowers are small and yellow; the sepals and petals are yellow, spotted with brown; the lip is also marked with brown. A native of Brazil; introduced in 1836.

ONCIDIUM RUSSELLIANUM.—This is a very rare and lovely species, and very distinct. The sepals and petals are brown and purple; the lip is purple; and the flowers are very large. A native of Brazil; introduced in 1835.

ONCIDIUM INTERMEDIUM.—This is a fine species, and well worth cultivating. The flowers are very large and yellow. A native of Cuba; introduced in 1836.

ONCIDIUM SANGUINEUM, (*blood-coloured.*)—The flowers are not very large, but they are borne on large spikes, and are very numerous; the sepals and petals are crimson-striped; the lip is crimson. A native of La Guayra.

ONCIDIUM FORBESII.—This is another handsome species, and well worth the cultivator's attention, the flowers are so rich in their colours. The sepals and petals are scarlet; the lip is yellow. A native of Brazil; introduced in 1837.

ONCIDIUM TAYLEURII.—The colour of the flowers is a yellowish brown; the spike is slender, and few flowered: this is not a handsome species. A native of Mexico; introduced in 1836.

ONCIDIUM CONFRAGOSUM, (*straw-coloured*).—The colour of the flowers is pale yellow, or straw coloured: this is not a beautiful species. A native of Mexico.

ONCIDIUM TRULLIFERUM.—This is a very pretty species. The pseudo-bulb is long and of a bluish-green colour; the leaves are two on each pseudo-bulb, and of a yellowish-green colour; the flowers are yellow and blue, that is, the lip is yellow, the sepals and petals are of a bluish purple. A native of Brazil; introduced in 1839.

ONCIDIUM EXCAVATUM.—This is another handsome species. The flowers are yellow, with the lip hollowed out—hence the name. The sepals and petals are yellow, spotted with brown. A native of Brazil; introduced in 1839.

ONCIDIUM WENTWORTHIANUM.—The pseudo-bulbs are of a dark green colour, and beautifully spotted with dark brown; the sepals and petals are green, spotted with brown; the lip is yellow; and the flowers are borne on very long and slender spikes. It is easily distinguished from the others by its beautifully spotted bulbs. A native of Mexico; introduced in 1835.

ONCIDIUM PHILPSIANUM.—This is a very splendid species. The flowers are large, and the lip is yellow; the sepals and petals are green, spotted with purple; the flowers are borne on very long and strong spikes, and very much branched. It is a very true species; although it is considered by some botanists as only a variety of *altissimum*. A native of Brazil; introduced in 1837.

ONCIDIUM MICROCHILUM.—A very singular species. The lip is very small and yellow; the sepals and petals are yellow, beautifully spotted with purple. It is only a one-leaved species, and easily known from all the others by its small lip. The leaves are very thick, and of a purplish colour. A native of Mexico; introduced in 1838.

ONCIDIUM ERIOPTORUM (*woolly flowered*) is nearly allied to *microchilum* in its habit; but I do not know what the flowers are. A native of Mexico; introduced in 1840.

There are many other species that have not yet flowered; but I shall communicate them for the "FLORIST," as soon as I know of them. And there are new species brought into this country every day; this being a genus that extends itself over nearly every portion of the tropical world; and enlivens the trees with its beautiful flowers, and perfumes the woods with their sweet scent; many of the species being sweet-scented, and the *Oncidium Lanceanum* has the exquisite perfume of the violet.

P. N. DON.

CONSTITUENTS OF BULBS, ETC.

BULBOUS stems, for they are really not roots though commonly so called, are very curious bodies. They consist of a principal and permanent part, called the base or radical plate, which answers to the *life-knot* or *collet* of other plants, whence all the other members annually proceed. These members are, first, the real roots, which are either fibrous, like those of the tulip, or somewhat pulpy and substantial, like those of the Hyacinth;—secondly, the leaves, which are of two descriptions; namely, an uncertain number attached to the edges of the radical plate, which are fleshy, abbreviated, and seldom or never expanded, forming together what is called the bulb;—and thirdly, a central set, which embrace and rise with the flower stem, and become perfect leaves. Thus the roots, leaves, and flower are annual productions, which, when the seed is ripe, all die and disappear, except a few of the exterior fleshy leaves, or scales, as they are sometimes called, which are pressed outwards by the internal growth, to form the outer covering and give apparent identity to the bulb. But there must be some other identity? because if the same bulb be again planted at the proper time, it will flower again in the next year. Yes, assuredly it will; but without assistance from any part of the growth of the preceding year, except that which was invisibly formed while the former year's flower and foliage were perfected.

To understand this rightly it must be observed, that the radical plate is a member which appears to be composed of an infinite number of incipient or embryo gems, that are developed seriatim, either in the order of their seniority or position. The first, which occupies the centre, is that division or gem which will be perfected in the ensuing spring with its leaves and flower, and nourished by its own roots produced at the same time. While this is progressing, the next gem or division is gradually swelling into form and filling up the space before occupied by the first. A third succeeds the second, a fourth the third, and so on as long as the radical plate exists; and thus the identity of the bulb is continued by this consecutive series of gems given off by the radical plate.

When the bulb is particularly vigorous in consequence of being planted in a highly favourable soil, not only will the first division be expanded, but the second also; so that the plant will present two flower-stems, and if these receive any accidental check, one or several offsets will be produced from the edge of the plate under the surface of the ground.

The cultivators of bulbs are well aware of the compound character and divisibility of the radical plate. Some valuable bulbs are shy in producing offsets, such as the Hœmanthus: but if the upper half or top of the bulb be cut off so as to prevent it flowering or shewing any upward growth, several offsets will very soon issue from the edge of the plate. The same expedient is practised by the Dutch florists when they wish to multiply any new or favourite variety of the tulip or hyacinth. By which operations it is manifest that, though a bulb under ordinary management may produce only one flower or develope only one of its divisions annually, yet by favourable treatment it may be prompted to produce a plurality of both flowers and offsets, and by mutilation many of the latter.

The above description of the constituents and evolutions of bulbs is applicable to any of that tribe of plants so called; although there are several modifications. Some are remarkably rotund and succulent, as the Spanish onion and hyacinth; others more lank in shape, and seem chiefly composed of the basis of the full grown or former leaves, as the leek and crinum. These different forms seem to be adaptations to their manner of growth, or durability of their annual or periodical products, and which is determined by the climate or soil of which they are natives.

The bulbous form appears to be a provision of nature for securing them against the parching heat of summer, which is their season of rest. In southern latitudes, where the sun's heat is intense, were their vital part not protected in a succulent bulb, they would be in danger of being withered up and killed during the dry season. The bulb also acts as a reservoir of aliment to serve and assist in the next growing season. It is this pause in the growth which enables the florist to raise them from the soil and keep them, as they would be in their native countries, perfectly dry until the autumn rains set in, when they are again planted. And though this removing them from the ground be not a natural proceeding, yet it operates favourably on the constitution of the bulb, by secluding it from atmospheric influence, and thereby reserving its energy, which, when again planted in fresh and suitable compost, induces free and vigorous growth.

A bulb is distinguished from a tuber in having its vital part covered by thick fleshy scales like the hybernacula of buds, folded over, and involving each other like coats, each being distinct and separable from the others; whereas a tuber is a solid mass of mealy or starchy matter, having eyes or buds seated in a crown, or dispersed over the surface, and without any appreciable covering except the first leaves in which the flower is involved previous to expansion. A tuber may be divided into several portions, each of which, if it contains an eye, will become a distinct plant, exactly like the radical plate of a bulb, the smallest portion of which, if removed with a scale or leaf, will survive and become an independent bulb. Even if the flower stalk of a narcissus be pulled out from the centre of the leaves, with a small bit of the plate attached, and planted in loose soil, it will become the nucleus of a new bulb. Some of the lilies have wonderful powers of reproduction; bearing bulbs in the axils of the leaves, and even in the capsules.

Many plants have been described as bulbous, which are really not so: such as the crocus, gladiolus, orchis, &c., were usually called bulbs instead of tubers, the difference of which has been already alluded to; and though these misnomers do not affect the culture, it is well, in speaking of them, to call them by their right titles.

There is another description of under-ground stem, which is neither a bulb nor a tuber; and called by botanists a *cormus.* This is exemplified in the iris, and several other plants both native and exotic.

Some bulbs are much larger than others; the polyanthus narcissus, for instance, has bulbs constantly larger than those of the tulip; and the cause, on dissection, appears to be, that the latter has seldom more than one of its divisions advancing to perfection at the same time, whereas the P. narcissus has constantly three or four of its divisions all progressing towards flowering at the same time, though in different stages of advancement.

Some bulbs, as the amaryllis, Guernsey lily, &c. present their flowers before their leaves; and a question has arisen, namely, do the leaves precede or follow the blossom? The general opinion is that the flowers are nourished and even fabricated by the leaves; and hence it has been advised in the case of the Guernsey lily, in order to enable the bulb to bloom every year, to keep the bulbs in glass frames till the leaves are perfectly matured, and which, it is said, will ensure a vigorous bloom in the next year. Such management is quite rational; because, if any one member of a plant be seriously injured or checked in its growth, or in the exercise of its functions, all the other members must suffer more or less.

March 5, 1841.

ON THE CULTURE OF WILD FLOWERS AND PLANTS.

THIS is a subject, to the consideration of which we proceed with no small degree of hesitation and difficulty; and what we at present write must be regarded rather as an inducement to others to study the subject, and obtain more information respecting it, than as anything in the way of direct elucidation, or the development of principles; for which, indeed, there are not sufficient facts.

It has been said, that "a prophet has no honour in his own country;" and the same may be said of a wild flower, or a wild plant, whatever may be the beauty of the one or the symmetry of the other. In comparatively rude states of civilization, just as in early life among those farther advanced, there is a sort of love of flowers; but it seems to partake of the fleeting nature of the blooms themselves. In very rude states of society, flowers appear to be wholly unheeded; and even where it is a little more advanced, the feathers of a bird are preferred to flowers as subjects of personal decoration. The Pelargoniums, the Ixias, and various other flowers of Southern Africa, are almost unrivalled in the brilliancy of their colours; and the flowers of the epidendral Orchidaceæ of intertropical America are equally remarkable for the singular shapes of all their blossoms, and the varied colouring of many of them. But notwithstanding these, which are high attractions to the floriculturist, neither the Hottentots and other South American tribes, nor the American Indians, use these flowers for ornamental purposes, or appear to set the smallest value upon them. The fact is, that the cultivation of flowers, in the way in which they are now cultivated by the more zealous and skilful growers in Britain and other countries, where taste is the grand source of enjoyment to all but the merest vulgar, belongs to a very advanced state of civilization and refinement,—a branch of what are truly denominated the fine arts; and a florist is an artist of a very high class,—far higher, indeed, than those who arrogate to themselves more pomp and circumstance.

But to proceed to our wild flowers. They are neglected for the same reason that the prophet is neglected in his own country —they are every day things in their appearance; and therefore we pass them by unheeded, unless in the case of new and strange ones, and these are prized by the botanist rather than the cultivator. This we might expect, for it holds good of all subjects, whether they be productions of nature or of art; but there is another cause of the neglect of wild flowers, in which there is a good deal of the philosophy of plants involved; and therefore it is to this that our attention should be directed.

In entering upon any branch of a subject which is in great part new, our safest plan is to take along with us as our guides those principles which are well established in such branches of the subject as are better known, and which are as general in their application as possible. Now, in the culture of those flowers that form the chief ornaments of our collections, and that include almost all florist-flowers, the plan is to establish and maintain the plant as nearly as possible in circumstances similar to those in which it is placed in the land of its nativity. We make our composts, as much as we can, in accordance with the native soil of the plant; but as there are some of the other circumstances which we cannot imitate so closely, and as there must be harmony in all that acts upon the plant, or is acted upon by it; and in this the modification is a matter not of known principle, but of experience which has to be acquired by the individual; and it is in this skill in these modifications, that the superiority of a first-rate florist consists.

After the soil, the next consideration is the seasonal application of the two grand stimuli of moisture and of heat, together with the relative degree of moisture, and generally speaking of heat, in the particular spots where the plant naturally grows most strongly, and flowers most abundantly.

Moisture and heat, to a great extent, act and re-act upon each other; and though the varying position of the sun, and of the length of the days and nights, is a sort of general principle, though nowhere obeying the law which we would deduce from the latitude, yet we must be regulated by local causes. Thus, for instance, in tropical climates, the humidity is divided into alternating periods; and the greatest heat falls upon the latter part of the dry period and the early part of the rainy one. Hence the grand season of growth and flowering falls upon the period of the rains, and partially on the commencement of the dry period; for it seems a general law, that too much humidity applied to plants while they are flowering and ripening their seeds, is unfavourable to both of these operations. We might infer this from the nature of the operations themselves. Moisture is essential to the increase of volume in the individual plant; and experience proves that this increase is unfavourable to flowering and fruiting. Therefore, in those climates to which we allude, the plants are so adapted, that the heat and moisture bring the parts of fructification forward to nearly the natural size; and then the full expansion, the act of fructification, and the after process of maturing and ripening the seeds, are effected by the agency of the sun and of the atmosphere. This appears to be the severest labour which a plant has to perform, and in those extremes of season to which we allude the plant passes into a state of repose; which is more and more marked in proportion as the drought and rain are more completely confined to their own periods.

The third circumstance, and the only other one which we shall mention, is the natural atmosphere of the plant, or the air in which it grows and flowers best. This is much more varied than either of the two former; and we find it not only in the same country, but in very limited distances, in all countries which have the surface much diversified, and are exposed to winds blowing from surrounding districts of varied character. Thus some plants thrive well only in the rank and damp air of fenny and marshy places; others thrive well only in shaded situations; some love the open glade, where the air is balmy and pure; and a few thrive best in the keen exposure on the mountain, and can with difficulty be kept alive in any place which, according to our common but erroneous views, is better adapted for vegetation.

In Britain, the samphire upon the rock near the water line of the sea, and the lichen on the mountain-top, may be regarded as the extremes of vegetation, in respect both of habitat and of character; and though these plants had never so many charms for the florist, not one of them could be kept alive in his grounds. This extends to some little elevation in plants which were exposed to the sea; and in mountain plants, though they vary in susceptibility to culture, the range is considerably greater. Therefore, were we to attempt the cultivation of our wild flowers, we should be confined to a certain portion of the middle of the series, as respects elevation above the level of the sea.

But this elevation is not all; for plants have a geological distribution as well as a distribution in altitude and exposure. The plants of the chalk soils will not, for instance, even in the close vicinity, and at nearly equal elevation, grow upon the sandy moors; and the stunted heaths with which the latter are covered will not grow on the chalk. Even where the tertiary formation is the upper soil, we have great varieties in the predominating

As we proceed northward in England, and strata below the chalk form the surface soil, the plants upon each different soil are of a different character. If that soil contains a large proportion of iron, it is unfavourable to the growth of surface-vegetation of any kind, and especially so for the more delicate flowers and flowering shrubs. Thus we have frequently heard that in Northamptonshire a meadow is long in coming to anything like perfection, but that when it does, it is equally retentive of its good qualities, for which reasons a Northamptonshire farmer is very chary in breaking up his bit of ground. We have also heard that the common moss-rose cannot be preserved for any length of time in Northamptonshire, and that the white variety cannot be made to flower at all. Much of this is no doubt owing to the soil, but something too must be attributed to the atmosphere.

The geology of plants is, however, a long, varied, and very complicated subject; and the data for the investigation of it are far from being complete;—chiefly because geologists are not botanists, nor botanists geologists,—so that the labours of the one throw but little light on those of the other. For the reasons stated, it is obvious that we cannot enter into any of the minutiæ; and besides, the examination of even one department of the compound science would occupy not only many papers but many numbers of our work, to the exclusion of more appropriate matter. Therefore we shall conclude this paper by a very few observations on those native plants which have been cultivated for the sake of their flowers. When we examine them in their natural state, we invariably find them on soils, if not in situations bearing a strong resemblance to those of our cultivated grounds. The Pansy is the only florist's flower which has been cultivated out of a wild British one; and we are not absolutely certain as to some varieties even of it. Now the Pansy, though it grows on soils of various degrees of richness, always prefers the cultivated grounds, or grounds which are analogous to them; and in the wild state it is very prone to run into varieties, both in the size and colour of its blooms,—the blooms being larger, and the colours richer, in proportion as the soil is more rich, and the situation better sheltered from the cold winds. Even in the garden, the Pansy retains its tendency to sport varieties of bloom; and if the same plants are left to flower without artificial training for a year or two, they degenerate back to the wild flower.

The Daisy is another plant which has been a little improved by culture, though it is still one of the humblest inmates of the garden. Now, the Daisy is found in a great variety of situations, from the little bit of green and kindly sward pretty high on the hill, to the rich lowland meadow, though not if that meadow is frequently flooded, or of a swampy nature. In all the situations the Daisy varies in its development, being a tiny and unheeded thing upon the exposed sward, and getting larger and more attractive, as the soil becomes richer and the situation warmer. In the case both of the Pansy and the Daisy, therefore, we place the plant in its natural circumstances, only a little more heightened and favourable to its growth.

The Scotch Rose is another instance, not only of submitting to culture, but of being highly improved by it; and this rose, though not a mountaineer, is found upon the stony wastes and hills, generally those near the sea, and sometimes at such a height as would be considered a mountain in the flat parts of England. But the Scotch Rose is not a plant of the bare soil, or of the tangled brake;—it loves free and open air, and a considerable quantity of rich soil. Hence it is found near projecting stones, where the eddy of the winds deposits the richest portion of the soil, or where any other kind of shelter produces the same description of mould for it. When brought lower down, and especially farther south, it is found to become more delicate; and unless it gets light loam, in which there is scarcely any portion of iron, and free exposure to all but the most cutting winds, it languishes, and will not bloom or even live beyond a very limited number of years. We look to some of our correspondents who are eminent for the growth of Roses, and of this rose among the rest, to give us a paper expressly on its culture, and embodying the results of his own experience.

The Foxglove is another plant which, though it can hardly be said to be improved by cultivation, is found in pretty elevated situations, though it always requires a rich soil and some shelter. The finest beds of this plant, in the wild state, which are to be met with in Britain, are on the southern slopes of the Grampians, more especially the valley of the Tay, and its lateral branches, above the pass of Dunkeld; and we have never observed them in such perfection when introduced into shrubberies, where they are tolerable, though certainly not very ornamental; and in a flower-garden they are quite out of place. Such are some of the wild British plants which are taken into culture for the sake of the flowers. The number is trifling, and the genera of small importance; and we believe that the interest could not be heightened by any additions that could be made.

When we come to the more rare genera which it might be desirable to cultivate, if not for their beauty, at least for the peculiarity, we find all our efforts unavailing. The orchidaceous plant, whether of the chalky down, the semi-quagmire, or any other situation, we can do nothing with it; for it will not live under any artificial treatment hitherto known; and the same may be said of all our wild plants which have any thing peculiar about them.

What is the cause of this stubbornness? We can grow the plants of every climate from the equator up to our own; and some of them, which are natives of comparatively low latitudes, we can greatly improve,—as is the case with the Dahlia, for instance. But we cannot so cultivate our own native plants. As we go northward the difficulty increases, and it is this which throws some light on the cause: but we must defer to a future opportunity, if such should offer, the few remarks which our scanty knowledge will enable us to make on the principle.

ON ERICÆ.

BY MR. R. PLANT. (*Continued.*)

THE subject of my last paper being placed in the first tribe of the order of which it is the type, I will now just run over some of the most prominent plants contained in it, passing over those of less interest to the florist. Most of the plants in this tribe, (*Ericæ Veræ*,) and indeed the whole order, are natives either of the elevated part of the Cape of Good Hope, or of North America; consequently being a near approach in constitutional habits to our indigenous plants, and by this the cultivation of them is manifestly easy.

The genus *Blæria* naturally occurs to the mind in connexion with that of *Erica*, to which it bears some resemblance. These are interesting little greenhouse shrubs, and with the treatment recommended for *Ericas* will do very well: the prettiest are *B. ericoides*, *B. purpurea*, and *B. ciliaris*. The *Enkianthus* is another well known and much prized genus; a native of China, and a very great ornament of our conservatories. Nothing can be finer than the appearance of a well-grown plant of *E. Quinqueflora*, at the season of its flowering; its beautiful pendulous pink flowers, and rich bursting buds, have a very fine appearance, especially in the month of February, its season of flowering. The best soil for this plant is a mixture of sandy peat and loam in about equal parts; the plant, when shifted, should be shaken out of the pot, and the matted roots separated, (not cut off,) and replaced in a pot one size larger than the last; and this should not be done till the plant has filled the pot with roots, as they will not bear over-potting. This plant requires but little water in the winter; the surface of the soil should be moved with the hand before water is given, that the cultivator may be certain the plant requires it; for it often happens that the top of a soil, especially one in which sand is a part, will appear dry from its exposure to the air, fire heat, sun, &c. while that immediately under it will be quite damp enough for all the purposes of vegetation; and thus by an indiscriminating watering many plants receive an injury from which it is often impossible to recover them. Cuttings may be struck, though attended with some difficulty, in small pots filled entirely with sand, covered with a bell-glass, and placed on a shelf, surrounding the pot with moss. They do better this way than when plunged in heat.

Next to this is the *Clethra*. *C. arborea* is one of the neatest of conservatory plants. The best soil for this is peat and loam, with plenty of pot room; it requires a good supply of water in the summer. *C. Arborea Minor* is a variety of *Arborea*, both covered with beautiful racemes of pendulous white flowers in the autumn. There are five or six other species, all pretty ornaments of the American borders.

The *Cyrilla* is another very ornamental plant, included in this tribe. There is only one species yet known, I believe—*C. Caroliniana*. This is a very free-flowering plant, but of rather loose habit; it does best treated as directed for *Enkianthus*; it is very difficult to propagate. *Cyrilla*, in honour of Dominico Cyrilli, who published, in 1788, a work on the rare plants of Naples, which is now one of the scarcest of botanical works. The remaining plants in this tribe are too well known to require any notice here.

The second tribe in this order, *Ericæ Vaccineæ*, contains but two genus, *oxycoccus* and *vaccinium*, the cranberry and whortleberry; both of great utility in their places, but not of interest to the florist. The third tribe, *Monotropea*, contains *Pyrola* and *Chimaphila* and *Monotropa*; the two first, hardy evergreen plants. Most of the species of *Pyrola* are indigenous, are very pretty, and well suited for shaded situations on a poor soil. *Chimaphilla*, of which there are two species, are natives of North America, but may be treated the same as *Pyrola*. The other genus, *Monotropa*, is a very curious parasitical plant. There are two species—*Uniflora*, a native of North America, and *Hypopithys*, a British plant; both of much interest to the botanist, but not to the general cultivator,—so will be passed over. This brings us to the fourth and last tribe, containing plants of the first importance; but being rather numerous, I will reserve them for a future paper.

CULTIVATION OF THE HEARTSEASE.

In a former paper on the cultivation of the Heartsease I gave some directions for preparing the soil, and making the plantations for spring blooming. I also recommended that garden pots should be turned down over the plants during severe weather. It will be well if those who planted in the autumn availed themselves of the suggestion, or adopted some such plan for the protection of the choicer varieties; as the extremely piercing winds, and the unusually low temperature of the air during the greater part of the months of January and February, have made sad havoc where newly-made plantations were left altogether unprotected, especially in exposed situations. But after a winter of remarkable severity,—such as "the oldest man living can scarcely remember,"

—the reign of the *Ice King* is now, it is hoped, nearly at an end, and the "cloud-embosomed lark" gives token of approaching spring, when the milder reign of *Flora* will commence, and the presence of her attendant train, unfolding their ever-varying charms, cause all loyal hearts to pay their accustomed homage, and rejoice

> "In Nature's resurrection from the tomb
> Of icy Winter's deepest, darkest gloom."

But I must not indulge in the wanderings of fancy, but endeavour to give a few practical directions suitable to the advancing season.

The beds planted in the autumn should now be loosened with the fork, and the plants carefully gone over, for the purpose of fixing firmly in the soil such as the frost may have lifted, which will be found to be the case with most of those that were not well established before the winter set in. If the stems of any of the plants are much exposed it will not be advisable to force them down, but to remove the soil, and lay them aslant; it is important that they should not stand much out of the ground, as the frost at night, and the sun by day, at this time of the year, frequently act on the unprotected stems and affect the juices of the plants, so as to prove fatal after they have withstood the more equal severity of the winter. It is, at least, of equal consequence that the plants, *at this season*, should be protected from the increased action of the sun, as from the diminished action of the frost; they should, therefore, be again covered at night, if frosty, and the pots removed only for an hour or two towards evening. The same treatment should be observed if rainy days are likely to be succeeded by frosty nights: which, in this changeful climate, is often the case in the month of March.

At the latter end of March the beds should receive a top dressing of rotten dung and well-decayed turf or fresh maiden soil; this dressing should be at least an inch thick, and the plants left with merely their heads uncovered. During the prevalence of the usual dry, cutting easterly winds, the garden pots may again be used with advantage, but should be removed occasionally for a few hours, to give light and air. These minutiæ may appear tedious, but it is principally by attention to trifles that the persevering and industrious florist ensures success; and as it is my aim to enable the admirers of the Heartsease to cultivate it in perfection, I would omit nothing calculated to produce the desired result; but if, during the winter or early spring, the plants are suffered to become unhealthy, all the after care and attention that may be bestowed will most probably fail, and disappointment consequently ensue. The appearance of the plants on my principal bed—which, up to the present time, have been subjected to the treatment recommended—compared with others planted at the same time and not so treated, is highly satisfactory.

Succession Bed.—In the beginning of April, a bed may be formed to succeed those made in the autumn. For this purpose, the cuttings taken in October or November, if well rooted, will be most suitable. This bed should, if possible, have a northern aspect, so as to admit the morning sun only; the same directions before given being observed in preparing the soil, except that no shavings should be mixed with the horn dust, that decomposition may take place immediately. If well watered in dry weather this bed will produce blooms in perfection through the months of July and August.

Raising Seedlings.—Of all the delightful occupations of floriculture, perhaps that of raising new varieties from seed is the most delightful; and in watching the progress of this creation of new beauties, the careful cultivator is amply repaid for the trouble and attention bestowed on the work. About Lady-day the seed may either be sown in boxes of light earth placed in a cold frame, or in the open ground. If the quantity be small, the former method would be advisable; as by keeping the frame generally closed, or by covering the boxes with hand-glasses, the seed will germinate with greater certainty. No bottom heat will be necessary. If sown in the open ground, the soil should be light, and the seed sown in drills about three inches apart, and lightly covered over with finely-sifted unadhesive mould. If the sun be powerful, the bed should be shaded, so as to keep the surface constantly moist, or the seed will not germinate freely. About the beginning of June, the seedlings may be transplanted into beds prepared for that purpose, and made moderately rich; the plants put in rows four inches apart, and about three inches distant in the rows. If the weather is very dry, it will be necessary to water occasionally, until they are well established. They will bloom abundantly through the months of August and September, when all those which possess no good property should be removed, and not suffered to go to seed, or to impoverish the soil.

In my next communication I purpose making a few remarks on the essential properties of a first-class show flower, and on such other points as may appear to be called for by the progress of the season.—*Midland Counties Herald, Birmingham.*

CALENDAR FOR APRIL.

STOVE.—Much attention is necessary here this month, as the plants will now be growing; very little fire-heat is necessary; give air on fine days; re-potting, where it is required, may yet be done. Ferns and orchidaceous plants, where they are grown among other plants, must now occupy a shaded part of the house. Climbers should be attended to constantly; the young shoots tied to the places they are intended to fill; and, where more wood is desired, stop the leading shoots. Succulents require more water now. A few geraniums may still be brought in for early flowering. Fumigate occasionally, and steam often.

Greenhouse.—Air and water may now be given more abundantly. Oranges, camellias, &c. should have a top dressing, if required. Hyacinths, tulips, roses, &c. that have done blowing, should be removed to a cool open shed, and but little water given them; free-growing plants may still be propagated for bedding out; syringe the plants overhead occasionally—the morning is the best time. Should any plants yet require shifting, let it be done at once.

Flower Garden.—Protect choice tulips from heavy storms of hail, rain, and wind. Plant out towards the latter end of the month. Cuttings should be taken for autumn flowering; keep the plants small, as they then flower better. Top dress pinks, ranunculus, and anemones. Auriculas require plenty of air; water them often in small quantities, taking care not to wet the flowers; remove them to the stage as the bloom expands. Picotees, carnations, &c. must have a good supply of water. Plant out early stocks and a few other annuals; sow more in the flower-beds. Continue to strike dahlia cuttings; pot them singly in thumb-pots, and give them a little bottom heat; those already struck should be inured by degrees to the air. Re-pot balsams, amaranthus, egg-plants, and all other tender annuals, except cockscombs, which should remain in small pots till they show flower; this keeps them dwarf. Where it is yet requisite or desirable to separate or transplant herbaceous plants, let it be done immediately, as also all other planting.

THE WEATHER FOR MARCH.

The weather for this month has been quite phenomenon; and it has been so chiefly from the absence of all those atmospherical circumstances which usually characterize the season. Perhaps there never was a month in which the air was more tranquil, or the temperature more uniform. For vegetation this was, of course, highly favourable; and it augurs well for a fine bloom and abundant crop. Many vegetables are not so far forward as in seasons when March is turbulent; because the cold weather which preceded brought down their tone, and made them less susceptible of being stimulated by temporary intervals of warmth. This is in so far connected with the general characters of the winters of 1840 and 1841,—the former being one continuous display of soaking rain, and the latter of continuous frost, accompanied by very little rain. We have again and again cautioned our readers to beware of drawing hasty conclusions as to what shall be the future state of the weather, because the philosophy of the atmosphere is very imperfect; but, in as far as the principles go, we are inclined to conclude, that the summer will come on in the same gradual manner, and that there will be no conflict of the atmosphere until the autumnal rains; and the conflict then will depend much on the character of the summer. Should this turn out to be the case, the two years will afford very useful information on the subject of the weather.

THE FLORIST'S LETTER-BOX.

THE length of some articles in the present number, and the injury they would receive from being divided, and in part postponed, oblige us to be very brief this paper.

"R. F." of Manchester is informed that we shall in due time take into consideration the culture of window-plants; but to give a complete list with explanations, without which it would be of very little value, is incompatible with our limits; and it may, or should be, had gratis of any intelligent nurseryman.

The same correspondent may be correct in considering his plant a Daphne odoratissimæ; and, if so, there is only one way in which it can be propagated, viz. by grafting it on the stock of the common Daphne mezereon; which is almost the only means of gaining new plants of the finer species, as cuttings will not strike, and seeds are rarely, if ever, perfected in this country.

"E. Y." of Ryde, has most likely destroyed his plants of the genus *Crassula*, by overkindness, which is the death of more foreign plants than can well be told. E. Y. mentions the successful growth of Geraniums in the same house with the Crassula. This in itself is enough to injure those plants, and also the Cacti, for the water which produces a healthy growth in Geraniums, is unfavourable to the flowering of the other plants. These take their rest in a remarkably dry atmosphere, and where not a drop of rain falls; and this rest, in as far as the increase of the individual plant is concerned, may be said to commence the instant that the flowers begin to expand. If at this time, or after this, till the season of growth comes round again, the plants get water, or are soon placed in too moist an atmosphere, a new growth immediately starts, and the parts of fructification are converted into shoots. We have analogous instances in some of our common plants: thus, if very moist weather set in at the blooming season, the anthers of roses are apt to be converted into shoots, and a bunch of green leaves rises up in the middle of the flower.

"R. W. B." of Kingston, has, we suspect, kept his Tigridias too long out of the ground, as they are bulbs which do not require much drying. Therefore, after they have been for a very short time exposed to the air, they should be put in pots or boxes, in mould not absolutely dry, and yet not moist enough for stimulating them to action. If treated in this manner, and care is taken that the bulbs are sound, there is no fear of the growth.

Erysimum Pereskiana follows the law of the Cruciferæ, and is an annual, a biennial, a triennial, or even lasts four years, according to circumstances. It does the same thing in its spike of blossoms; and if any one advertised that the whole spike would be in flower at once, they were in error; for the pods begin to form on the lower part before the upper blooms have expanded.

Those friends who have made inquiries about the "Geography of Flowers," are respectfully informed that, had it not been for the severe and protracted illness of the author, the book would have now been in progress; but it will soon be put in hand. It is not possible to state the exact price, as the subject is difficult and extensive, and in some respects new; but as usefulness, not ornament, is the object, the price will not exceed seven shillings, nor will it be under five.

THE

MAY 1, 1841.

ROSES—THEIR NUMBER AND VARIETY.

To write any thing in praise, or even in description, of the Rose, as a genus, including all its species and all their varieties, would be an unnecessary as well as a hopeless task. It may be said to be the oldest of celebrated flowers; and, in the impassioned strains of the ancients, we find it associated with the Lily of the Valley, as expressive of all that is pleasing to the senses and renovating to the mind. In the mythologic ages it was sacred as the flower of young affection and endearment, and of mature love, — the favourite of Cupid and of Venus; and stripping this of the mythological phraseology, which in all cases was a fictitious mantle thrown around something previously felt, no similitude of any flower could be more appropriate.

The Rose-bud, the sweetest subject that appears in the garden, is typical of all beginnings from the issue of which enjoyment and pleasure are expected. The early dawn,—the lamb playing its first gambols around its mother,—the young bird trying its half-fledged wing,—young schemes and projects,—young life,—young love, (though the last is especially subject to a "worm i' the bud,")—and a hundred other young associations, all of delightful kind, are linked with the Rose-bud. There seems even a physical attraction in it beyond all flowers, in every stage of their growth, and an attraction which addresses itself strongly to the human feelings, long before the organs are capable of giving those feelings " a local habitation and a name." Turn an infant out to free range in the garden, when it is but just able to totter, and would certainly be upset by descending from the grass-plat to the gravel-walk, and let there be within the sphere of its young vision, and the reach of its little hands, flowers of all hues, and in every stage of expansion: it may admire and exult over some more than others; but let a Rose-tree, redolent of buds, and with no lack of expanded blossoms, once catch its eye, and to that it will totter with an eagerness and rapidity previously unknown. Full-blown Roses are also generally admired; but the admiration of them wants the glee and excitement produced by the buds. These the child specially claims as its own, and pulls them off with all its might; but as the principle of hoarding does not yet display itself, the infant either pulls the individual bud to pieces, or instantly drops one in order to pull others. This clearly shows that there is a fascination about Rose-buds arising purely from nature, and not in the least influenced by those feelings of and fondness for property which so generally corrupt the minds even of those who are most thoroughly good in their childhood. This shows, as clearly as such matters can be demonstrated, that there is a charm in this early stage of the Rose, which accords well with the honest simplicity of human beings in the very early stages of life, and when the world generally can have no influence upon them. When Roses are in full blow, they are certainly, in every sense of the word, the most delightful flowers which the florist can cultivate; and much as he can do, and has done, in the case of other flowers, the Rose is the most obedient to his labour, and rewards him better for it than any other flowering plant. An ample bed of Roses, such as that of Mr. Rivers at Sawbridgeworth, which extends over eight or ten acres, in which all the plants are of the choicest sort, their history known, and their health and bloom in the greatest perfection, has no parallel among the productions of the earth. The habits and colours of the several varieties are varied almost without end, and yet there is great beauty in each of them. Then the perfume with which they embalm the zephyr as it plays gently over them, is quite unique, and nothing among other flowers can be compared to it. Most of the fragrant flowers have something of a sickly nature in their perfume, which, while it gratifies the sense for a little, soon brings a heaviness over the mind. This is especially the case with bulbous-rooted flowers, such as hyacinths and lilies, which contain a small portion of prussic acid, and a much larger portion of diluted carbonic, which soon brings the perfume to the ground. The odour of the Rose, on the other hand, is all-exhilarating, floats light and buoyant on the breeze; and, besides being the most delightful to the sense, it gives tone and elasticity to the mind.

We must, however, defer our general description until the Roses are in bloom, and we see them on their parent-stems in all the fulness and freshness of their beauty; for which object we purpose to make the splendid collection of Mr. Rivers the scene of our grand entertainment of "Love of the Roses among themselves;" and we shall look to that first-rate cultivator for some particulars of his mode of cultivation, besides what are contained in his "Rose Amateur's Guide." Roses, as we have said, have been admired anterior to the epoch of recorded memory; and to say that a man loves Roses is to pay a very high compliment to his feelings.

In most instances the odour of a flower dies along with it, and the decaying petals are offensive to the nostril; but not so the Rose; we find it yielding a variety of fragrant liquors which do not require the corrosive ingredients which are in many of the compound essences of the shops; and attar of Roses, especially when prepared in the valley of the Ganges, where square miles are devoted to the growth of this flower, is now almost the only substance which, weight for weight, is more valuable than gold.

Roses are natives of a great number of climates; and we have them in Europe, Asia, Africa (?), and America, though in the two last they are comparatively few. We are not aware that any true Rose has been found in the wild state in Australia, Southern Africa, or any other part of the southern hemisphere. They are plants of the temperate parts of the north; and except in a few particular longitudes, they are more polar than tropical in the greater number of their species. Whatever part of the world they are natives of, there are comparatively few of them that are not hardy plants, capable of bearing the rigours of all ordinary seasons in the open air. Not above a dozen of species require a frame or other shelter; and those are all from China; and probably the greater number of them are hybrids. The ordinary Roses, which are either natives of this country or have been long habituated, are very hardy shrubs, and will grow in most situations

Thus we find the ordinary Cabbage, or Hundred-leaved Rose, in the garden of the humblest cottager; and yet some of the choicest varieties cultivated by the florist have been obtained by crosses with that and various other species or varieties.

Roses, notwithstanding their beauty and the estimation in which they are held, are plants of which it is exceedingly easy to obtain a succession; and if the necessary precautions have been taken, a number of new varieties may be had almost in every case of sowing the seeds of Roses, even though there has been no intended cross impregnation. Some of the Roses, such as the Damask, produce a great quantity of pollen; and when the natural anthers of a plant are deficient in this article, the plant is liable to be impregnated by that one in which the pollen is more abundant. This natural tendency to cross impregnation, or indiscriminate mixture, is a great addition to the means, and encouragement to the hopes of the breeder, when he breeds for new varieties. He has not the same anxiety and the same apprehension of the want of success of new varieties of most flowers. He knows well that both the fertilizing and the fertilizable energies of his plants are vigorous—at least, he may choose them so; and then, if he guards against common casualties, he is sure to have plenty of good seed. Farther than this, if he has had much practice, he knows which parent the resulting plant will resemble the most; and thus he is guided, as it were, to the production of a new Rose, the leading characters of which he knows tolerably well beforehand. The cross impregnation of Roses is, however, a very interesting department of floriculture, and throws much light upon the process of cross-impregnation, whether natural or brought about by human art. This renders the subject well worthy of being treated in a separate paper.

From the ease with which Roses are propagated, the new varieties obtained, and old ones multiplied by cuttings, by layers, or by budding on the briar, Roses are exceedingly numerous, both in varieties and individuals; and they are, perhaps, cheaper, in proportion to their intrinsic value, and the real pleasure which they afford, than any other plants whatsoever. The varieties already existing amount to between 1,500 and 2,000, and new ones are added every year. Some idea of the value of a single species in the obtaining of varieties may be found from the fact, that nearly 200 varieties have been obtained by impregnations by or with the little thorny Rose of the Scotch hills, *R. Spinosissima.*

Roses are very general plants as to climate, which is a great advantage to the cultivator; and we have seen ever-blooming Roses of China in full blow over the snow, on south walls, in sheltered situations, pretty far north in Scotland. In respect of soil, they are a little more particular, but not very much; and in this they do not require half the trouble of many plants of very inferior value. Loam, rather rich but light, is the best soil for them; and if they are attempted to be forced by quantities of rank manure, they run to wood and leaf, and are very inferior in their bloom. They are also partial to fine and fresh air, and never have their proper colours or odours if pent up in confined and unwholesome air. It would be in vain, however, to attempt describing the culture of Roses in one single paragraph of a general paper, and therefore we shall look to some of the most eminent cultivators to furnish us with the particulars, which will require separate sections.

In their times of blooming, there are two grand divisions of Roses—those which bloom in summer and those which bloom in autumn; and perhaps the finest of the whole in colour, in form, and in odour, belong to the latter division. They so readily unite with each other, however, that in a sufficiently large and properly selected bed, there is a continuous bloom from the beginning of June to the end of November; while, in situations favourable to them, the perennial bloomers fill up the vacancy from the autumnal ones till the spring ones again return.

The variety with which our present number is adorned—PRINCE ALBERT—is one of the finest of the perpetual bloomers. It was raised by M. Laffay, of Paris, from a cross between that fine Bourbon rose, Gloire de Rosomène, and some choice damask China and hybrid rose. The drawing from which our figure was taken was made on vellum by a first-rate French artist, in November last, when the crimson gives way to purple tints in some places. It is very hardy; a vigorous grower, and a free, but not crowded, flowerer. It answers well either as a dwarf or standard. Mr. Rivers, of Sawbridgeworth, is appointed agent for the sale in Britain; and the plants will be delivered, carriage free, at Mr. Kernan's, Great Russell-street, Covent-garden, *early enough to bloom in the present autumn. The possession of such a flower cannot fail in being a great treat to every lover of that loveliest of all flowers—the Rose.*

ON WINDOW FLORICULTURE.

We have received several communications, requesting information as to the best methods of cultivating flowers inside windows, or otherwise for the ornamenting of rooms; and also to give a list of the flowers best adapted for this purpose. We admit that these are very interesting questions to a large proportion of the population, especially of towns, where the parties have no other means of cultivating a plant, and watching its progress from the bud to the bloom, which is the most pleasant part of floriculture. In the narrowest and darkest lane, where the rays of the sun can penetrate even by reflection, there is some flower that will afford a little greenness and growth, though it will not bloom well; and we have no doubt that there are, in the courts and lanes of the metropolis, thousands of persons who cherish a little sprig of plant, set in a broken jug, with as much zest as the wealthiest and most extensive grower regards his splendid collection. This has its use too, and its moral effect; for it has been observed that, among the very humblest classes, the female who has a few flowers in her window is never dissipated, while the dissipated one never shows a single flower, or if she gets one one day, it is gone the next. This shows the great moral effect of floriculture, even in the humblest style at which it can be made to appear. When we ascend a little higher in society, we still find the window flowers an unerring index to the character. If they are healthy and trim, and coming kindly into bloom in their proper seasons, it is a favourable omen; but if the pots are chipped and broken, the plants languishing, many dead leaves about them, and the coming bloom small and feeble, it is quite the reverse.

So important is this department of floriculture, so general is it, and so beneficial are its moral effects, that it is desirable to encourage it, and diffuse the knowledge of its principles by every means that can be devised. The root of all the valuable part of it consists in its giving an attachment to home, and that of the purest and simplest nature that can well be devised. But when the floriculturist will needs have the choicest sorts of florists' flowers, he then involves himself in labours which he has no scope for carrying out; and the result is what we might expect—disappointment. The questions which have been asked of us appear to bear upon this part of the subject; and though the said questions are easily put, the answering of them is a matter of great difficulty; because flowers disposed in the windows of a room are in a highly artificial and very peculiar climate; and it is not easy to say which are best adapted to that climate. The climate of a room is, generally speaking, more uniform than that of any place out of doors, unless in winter, when there is a fire during the day and none in the night; and then the strength of the plant is put to a very severe trial. None of the species from the tropical countries, which have winters of extreme drought, whatever the temperature may be, will suit this sort of climate, because it will not let them rest. In general the air of a room which people inhabit is humid, more so in proportion in winter than in summer; and in the former season the cold near the window condenses the moisture of the atmosphere, and renders it absolutely damp. The plants to which we allude are always in damp atmospheres during the season of their growth; and when they are in a state of repose the atmosphere is very dry. But in a room the heat and damp of the atmosphere during the day call the plants into action when they should be at rest; and the cold of the night checks their growth and makes them sickly. If water is given them, it is almost instant death; and even without water the plants seldom or never flower, but soon canker, and gradually waste away. The tropical orchideæ are the plants least fitted for window culture; and any attempt thus to cultivate them is sure to be a failure. In all tropical countries, according as the seasons are more strongly marked as rainy and dry, the plants are less adapted for window cultivation. At present these are, however, the most fashionable plants; and therefore those who can afford the price are anxious to have them, even for the decoration of their windows; but if they will have the flowers in perfection, for only a short time, they must content themselves with purchasing a new supply every year. This is an expensive mode;

and such as can afford even a decent show of such plants ought to have houses for their proper growth.

There is another climatal variety of plants which are not adapted for window culture. These are polar plants and mountaineers, both of which are exposed to much sun during the summer, and shrouded and protected by a mantle of snow during the winter. In the case of these, the sunny side of a mountain, or indeed any side of it, is warmer than a plain of the same elevation; and though the smaller elevation of the sun renders the momentary action less in polar climates, yet the deficiency is made up by the length of the day and the shortness of the night. Plants of this latter description can with extreme difficulty be made to thrive, or even live in a common garden, although their own soil is brought along with them; and if placed in a greenhouse or hothouse they certainly die.

From these observations it follows, that in the choice of window plants, we must be guided by their natural latitudes and atmospheres; and it is in avoiding extremes here that the success of the window cultivator consists. He will be pleased to observe, that whatever soil he may place in the pot containing his different kinds of flowering plants, and though he gives some a copious watering, some a smaller quantity, and some none at all,—yet that there is an important circumstance in which they are all alike. By admitting or excluding the light of the sun, he may approximate the natural quantity of light which each plant requires; and much more may be done in this way than is generally supposed. Thus, for instance, by shading the plants in the morning and the evening, he may reduce the length of our summer day to one approaching the tropical character; and by drawing his plants nearer to the glass or farther from it, he may approximate the different degrees of light which best suit those which grow in the clear sun and those which grow in the shade. All this he can do, though we believe there are very few cultivators of window flowers—that is, of flowers in windows or in rooms—who practise it or know anything about its principles. There is, however, one circumstance which he cannot vary to flowers in the same apartment, and that is the atmosphere, or the degree of moisture in it. That is common to the whole room, and of course to every plant in it; and therefore, though it is healthy for some, it is sickness and death to others. Then there is another result of ignorance in the majority of cultivators in windows, which is the destruction and death of many a fine plant; and that is the belief that when any plant looks sickly it wants moisture, and can be restored to health by the application of water, and by that only. Acting upon this principle, the plants are soused all over, and the mould in the pots soaked with water, often cold from the pump, when the plants have a high temperature; and of course all those which are not natives of continually dripping climates are hurt by this injudicious mode of treatment.

Almost the only plants which require a copious and constant supply of water at the roots are those which naturally grow in water or on quagmires; and among bulbous plants they are the only ones which will not macerate and rot, when the flower and leaves of the season are gone, and the bulb is in a state of repose. Therefore, without an accurate knowledge of the situations and climates in which they thrive naturally the best, no man can be a successful cultivator of a varied stock of window flowers. This, indeed, holds true in the case of all cultivators, although many of the situations fit for the flowers have been arrived at by trial and failure, until something succeeded at the last.

The first advice which we would, therefore, give to this class of cultivators is, to make themselves acquainted with the physical geography of plants in the situations naturally most congenial to them. This is the simple foundation of the whole; and without an accurate knowledge of it the cultivator gropes on in the dark, loses all his choicest flowers, and grows even the more common ones very imperfectly.

To enumerate all the flowers which are fit for window culture, to describe the modes of their treatment, and, indeed, to state anything but the general principles, would require a volume of some size. We have already pointed out that the extremes of tropical and polar vegetation are quite unfit for this species of culture. The same may be said of plants that grow at extreme altitudes,—those at the level of the sea, and those above or near the line of perennial congelation. It is impossible to attend to such small matters as the difference of elevation and aspect in towns and other places where window plants are grown; but they are considerable; and in the case of most plants freedom of air is equally so.

Bulbs, speaking generally, are not well adapted for window culture; and those who will have them for a year—they will not keep their good qualities longer in such a situation—had better procure an annual supply from the nurseries. The best suited for this purpose is the hyacinth; and if an amateur is supplied by a skilful nurseryman, and the plants are of choice and valuable quality, the nurseryman may so preserve them as that they will yield good blooms again and again before they are exhausted. The amateur must, however, distinctly understand that he cannot do it himself, if he has only windows to grow his plants in. In fact, a window gardener had better leave altogether alone what are called florist's flowers, unless he is contented to purchase and sacrifice them the same year.

We have pointed out the extremes which limit the window florist, both in latitude and elevation; and we may remark, that the more equally these extremes are departed from, and the more nearly they are blended together in a medium climate, the plants are always the better for his purpose. It may, however, in general be said, that an apartment has, upon the whole, a higher and more uniform temperature than the open air outside the building; and this must be studied in the selection of the plants. Then, in the next place, the plants should be such as to endure a great deal of rain, if it falls heavily and for short periods of time. The watering of plants, even in the most careful manner in which it can be performed, is quite different from the natural watering by the dew of heaven. It is given in copious quantities, and the giving is soon over. The plants of Southern Africa, which are upon the slopes and rocks towards the South Sea, receive pelting showers at times when not a drop of rain falls in the interior. Of these plants, one is the pelargonium, or geranium tribe, and the other the heath, many of the species of which, in Southern Africa, are exceedingly beautiful. The geranium takes so well with window treatment, that it may be considered as the general window flower; and though the heaths are very stubborn things to rear, and require different soil and treatment, still with due care they make fine window shrubs; and flowering shrubs which do not run too high are the best plants for this sort of culture. The Rhododendrons, the Kalmias, some of the Andromedas, and the Daphnes, and all the tribe of flowering plants which prefer a peat soil, can also be grown in windows; and unless they are allowed to grow too high, they have a fine appearance in their season. Among the window shrubs must not be forgot several of the myrtles, and the Camellia Japonica, which is the gem of the whole, and at the same time a very hardy plant.

All or the greater number of those which we have now enumerated are natives of moist atmospheres and dripping climates, though of porous soils, which have a good under-drainage. It is only while they are of low growth, and bushy down to the surface of the pot, that they do well for windows; for tall and scrambling shrubs never look well in such situations. Several of the Cactus tribe do very well for the same sort of culture. Their singular stems make a striking variety, and some of the flowers are very fine. They are a hardy race, being nearly allied to our common gooseberry, and living under considerable variations of climate and temperature. The Fuchsias are also well adapted for filling up the intervals of other shrubs; and as they are chiefly natives of countries where they are much exposed to the vicissitudes of the weather, they are capable of enduring very considerable changes.

There are but few annuals which we would recommend for window culture, and of these the greater number are hardy plants, and do better in boxes outside the windows than in pots withinside. Thus we have hinted at the general principle by which the window cultivator ought to be guided, pointed out the limits of his attempts both in latitude and in altitude, and noticed a few of the plants, chiefly the shrubby ones, which are best adapted for his purpose. There are, however, many eligible ones, both shrubby and herbaceous, which are well worthy of notice, and there are some which are of such recent importation, that it has not been determined whether they will suit for window culture or not; but we shall return to the subject, after we have collected the requisite information from sources that are perfectly authentic, which is a much more difficult matter than most ordinary florists are aware of. To give a long list of the flowers which somebody introduces into window culture, and to detail the manner in which somebody treats them, is an easy matter, because it is one of mere quotation; at the same time, it is one of very little use, because it is empirical, and nothing can be founded upon it: but to point out the flowers which are most suitable, the reasons why they are so, the modes of treating, and all the philosophy of the subject, is much more difficult; at the same time it is much more valuable. The mere details of any one person's practice are, as it were, the plucked flowers, which produce nothing, and speedily waste away. The philosophy, that is, the first principles, is the root, which, if properly treated, will send up and expand blooms again and again.

ON THE CHARACTERS, VARIETIES, AND CULTIVATION OF CATASETUM.

BY MR. P. N. DON.

CATASETUM is one of the most singular of all orchideous genera, being one in which the power of sporting into innumerable varieties or forms, and at the same time so dissimilar to the parents in the shapes of the flowers, is so great, that, at one time, it actually deceived the learned professor of botany in the university of London; and he created three genera, if not six, out of the single genus *Catasetum;* and the very plant from which he formed his genus *Catasetum* was not even a species, but only a form of his genus *Myanthus;* and even the genus *Monacanthus* is only another form of the genus *Myanthus*, or, properly speaking, *Catasetum*, as that was the first genus found; therefore, the genus *Monacanthus*, and also *Myanthus*, come under the name of *Catasetum;* and it is a question whether the genera *Cycnoches*, and also *Mormodes*, will not prove to be only sectional divisions of the genus *Catasetum;* for there is not any character to separate them from *Catasetum*, but the form of the flowers, which has been shown to be of no value in the genus *Myanthus* and *Monacanthus;* and even the genus *Cyrtopodium*, I much question whether it should be separated from *Catasetum*, for in habit they are very similar. The very plant from which Dr. Lindley formed his genus *Monacanthus* flowered the following season, and produced the flowers of *Catasetum tridentatum;* and sometime afterwards, a plant flowered at Chatsworth, and produced the flowers of the genus *Myanthus* and *Monacanthus*, and also *Catasetum tridentatum* on the same spike. Dr. Lindley, after seeing that, was obliged to unite the genera. Mr. Schomburgh, in a paper on the genus *Catasetum* says, that he has seen whole savannahs filled with *Catasetum tridentatum*, but he never saw a seed-vessel on any one of the many plants that he saw; but on the *Catasetum cristatum* he saw numbers of seed-vessels; therefore it at once proves that *tridentatum* is nothing more than an abortive variety of *cristatum;* and I doubt very much whether the *Catasetum luridum, semiapertum* and *purum* are any more than abortive forms of *Catasetum deltoidum;* and I think that the *Catasetum maculatum* of Bateman is not any thing more than one of the abortive forms of *Catasetum laminatum.* I have often examined the anthers of *Catasetum tridentatum,* but I never found any one having any pollen but in the *Catasetum cristatum,* and also in the *Catasetum deltoidum* and *barbatum.* I have often found the anthers filled with a soft yellow matter, which I believe was the pollen in an imperfect state; this, I think, ought to teach botanists a lesson not to be too hurried in forming genera, or rather in separating genera where they agree in external habits. The genus *Catasetum* is to be found in every part of South America, and also in Mexico and Guatemala. The reason why I have given in this paper the genus *Cycnoches,* and also *Mormodes* and *Cyrtopodium,* is, that they are similar in habit, and that they require nearly the same treatment.

The mode of treatment for this tribe of plants, at least what I should recommend, is, that the plants should be potted in pretty large pots, such as a twelve or sixteen size, but never larger; that is, when the plants have got to a good size, they should be grown in the pots I have recommended; but until the plants have got to a good size, that is, till they have made about six or eight pseudo-bulbs, they should be placed in smaller pots. When large enough, they should be potted in the size I have mentioned; the pots in which the plants are grown should be filled up about one-half with very large potsherds, and over these should be laid some rough peat, to prevent the other portions of the soil from getting amongst the potsherds. The soil in which the plants are grown should be turfy peat and leaf-soil in equal portions; the soil should never be more than one inch above the rim of the pot. The plants, when potted, and firm, should be placed in the growing-house, and no water should be given to them for some time, as the moisture of the house will be quite sufficient for them, till such time as they have made pretty good progress. When water is given, it must be given very carefully, as they are very apt to rot off. But when the plants get strong, they may have plenty of water till such time as they have formed their pseudobulbs; and as soon as they have perfectly finished their pseudobulbs, and the leaves begin to turn yellow, the plants then should be removed out of the growing-house into the dry and resting-house, till about six weeks or a month before their season of growing commences. They then should be shaken out of their pots, and should be placed on some dry shelf in the resting-house till they are potted, or rather, till they show some signs of growing, which they will be sure to do as soon as their season of growth commences. They then should be potted, as I before recommended, and then placed in the growing-house; and by this mode of treatment they will flower splendidly, much firmer than if they were kept in the pots all the season through. Before potting, all the old decayed roots should be cut off, as the old roots are of no use to the plant; and great care should be taken that none of the young roots are destroyed, as every young root destroyed tends to weaken the plant. When the plants are potted they should be made firm by tying them to sticks, so that the plants cannot be moved out of the position in which they are placed till they get firm hold with their new roots, which they will soon do.

Although I have mentioned three genera besides *Catasetum*, I shall describe them separately as I go along. Having said all that I think necessary, I shall proceed to give descriptions of a few species.

CATASETUM CRISTATUM (*crested*).—This is a beautiful species; it is the *Myanthus cristatus* of Lindley; it is the parent of all the varieties of *Catasetum tridentatum*, and also of *Monacanthus*. No children could be more dissimilar to the parent than several of this family, and not only unlike the parent but unlike one another in the form of their flowers. The lip of this species is beautifully crested; the little tubercles that form the crest are about the thickness of a small needle, and about a quarter of an inch long, and white. The lip and the sepals are green, beautifully spotted with black; the petals are light coloured, spotted with brown; and the column has the appearance of a bird standing with the head erect. A native of Demerara—introduced in 1834.

(*To be continued.*)

CULTIVATION OF THE SCHIZANTHUS PINNATUS AND S. PRIESTII, IN POTS.

TO THE EDITOR OF THE FLORIST'S JOURNAL.

SIR,—I have much pleasure in forwarding for insertion in your valuable Journal a few observations on the cultivation of the *Schizanthus pinnatus* and *S. Priestii* in pots; which, when well grown, are generally admired, not only for their singular and pretty flowers, but also for their beautiful habits of growth.

I sow the seed in October on a slight hotbed; and when the seedlings appear above ground, air is freely admitted to prevent them from drawing up weakly. When they have four leaves I prick them off into 48-sized pots, six or eight in a pot, being careful not to injure the roots when transplanting them. About six or seven weeks after this, I pot them in small sixties, placing them as near the glass as possible, with a steady temperature of sixty degrees. To prevent the plants from becoming spindly, I admit as much air as possible. The compost, half good maiden loam of a sandy nature, a quarter rotten dung, and a quarter leaf-mould, well mixed and riddled through a coarse screen. I am not particular about the drainage, as I never use more than three or four pieces of potsherds; when the weather is frosty I remove the plants to the succession pine-house until the peach-house is set to work, when I place them there to complete their growth. I pay the same attention to them as I would to balsams, or coxcombs, by shifting them into larger-sized pots as soon as the roots appear through the soil. When the plants throw out their lateral shoots, I tie them neatly to sticks; if allowed to grow a great length before being tied, handsome plants cannot be made of them. I shift a few of the best plants into larger sized pots, one foot in diameter. The plants so treated have attained seven feet in height, forming one mass of flowers from the surface of the pot to the top of the plant. When they are in flower I remove them to the drawing-room, conservatory, or greenhouse, as required, where they will remain in perfection two months, and sometimes more, which makes them a valuable acquisition to our collections of showy free flowering plants. It should be observed, that these plants will flower much sooner in forty-eights than in larger sized pots. To produce a succession, I flower them in various sized pots. Plants in small pots do not remain in flower so long as others in larger pots, but produce seed more freely. Their season of flowering can be prolonged by frequent applications of liquid manure. I generally had a succession sown, and treated as other tender annuals; but I found they never made the fine short-jointed tree-like plants as the others already mentioned, which is caused by the rapid growth they make, becoming long-jointed and unsightly. For the last succession, I sow *Schizanthus Hookerii* and *S. Humilis*. *Humilis* is best adapted to succeed *Hookerii* on account of its compact growth. These should be classed with biennuals, as they flowered with me the second year better than the first. To be kept rather dry and in the greenhouse during winter. When removed to the drawing-room, to be frequently turned round, to allow the genial influence of the sun to act in succession upon all sides of the plant.

EDWARD MORSE.

EXOTIC NURSERY, KING'S-ROAD, CHELSEA,
April 13, 1841.

ON ERICÆ.

BY MR. R. PLANT. (*Continued.*)

TRIBE IV. RHODORACEÆ.—IN this tribe is placed that most splendid genus the *Rhododendron*, which may indeed be termed the Monarch of the Parterre, the King of the Conservatory; for whether we regard it when covered with its brilliant masses of splendid flowers, or when deprived of them by the envious finger of seasonal changes — it is the same noble-looking plant—it wears the same appearance of innate (if I may so speak) superiority—and in point of durability, it may claim to rank with the Cedar of Lebanon and the Oak of Britain; in short, among Shrubs, in my humble opinion, (and in that I am not singular,) it certainly has no compeer. And what still more enhances its value is its equal applicability for both the conservatory and flower garden; it is equally at home, either in the most rich and costly collections of plants, or when placed in the midst of the little plot devoted to flowers in the cottager's garden. Among all the species, *Arborea* still stands proudly pre-eminent; and although varieties are raised every season, yet none of them surpass, or even equal it. They do not,—(I will not say cannot, for perseverance, directed by sound judgment, may, and does do things which at first sight appear almost among the chapter of impossibilities; but they do not)—attain that brilliancy of colouring so remarkable in *Arborea*. The great and principal object—the main desideratum among cultivators of this splendid genus—is the production of specimens or varieties bearing the colours and general inflorescence of *Arborea*, combined with the habit or harditude of the species inhabiting our flower borders.

It is with much diffidence I enter on this subject; yet, so anxious I feel for the attainment of this desirable object, that with pleasure I venture my little experience, in order to draw the attention of experimental florists more closely to this subject,—this being the season for immediate action. There is some difference of opinion among cultivators on the subject of hybridizing—whether the plant raised partakes more of the constitution of the male or of the female parent. Now, on observation it will be found, that by far the greater part of those hybrids raised from seed of hardy species, impregnated by *Arborea*, or other tender species, are at the best but half-hardy varieties, with generally an improved inflorescence. By this, it plainly appears, the hybrid plant receives the greatest part of its constitutional habit from the male parent, and its flowers from the female, or seed-bearing plant; modified or altered in both cases by the interchange of pollen. In illustration of this I will mention two or three experiments of my own. In the first, a plant raised from seed of (I believe) *Alba-purpurea*, crossed by *Arborea*, produced, as before mentioned, a half-hardy variety. Many of the plants from the same seed were planted in the open border as soon as strong enough to ascertain whether they retained the constitution of the female parent, but they all died.

In the next, the same half-hardy hybrid was again impregnated from a hardy species; the produce of this were perfectly hardy, but the flowers were smaller, and the colours less brilliant. In the third, the hybrid first spoken of was again crossed with *Tigrinium*. Here the produce was tender, or at most half-hardy. What the flower will be remains to be proved; but that the constitution of the hybrid is received principally from the male parent appears beyond controversy; so that to obtain this much-desired variety, it seems that *Arborea* should be made the female parent, fecundating with a hardy species,—a thing which did not occur to my mind when the above experiments were tried, from the supposition I entertained that the female had the greatest influence on habit. Having said thus much, I leave it in the hands of those who have inclination and opportunity for pursuing this interesting subject.

I now turn to the culture of this noble genus; and here I could wish it had fallen into more efficient hands; but as an offering is valued more for the spirit with which it is offered than for its own intrinsic worth, I will proceed. Proper soil and a pure atmosphere I consider the most essential things in growing the *Rhododendron.* To obtain the first is often a matter of much difficulty. I have known many mixtures tried; and many wearisome journeys for peat from many and widely-separated places I have undertaken; but I would say to every cultivator, find out where the hardy species grow most luxuriantly in your own locality, procure that, and no disappointment will ensue. With respect to pure air, it is of the first importance. By pure air I mean a situation open to the sun, and not crowded by other plants; for no plant is more impatient of a confined situation, and consequently heated and impure atmosphere, than the *Rhododendron.* This applies to those grown in a conservatory, and also to those in the open border, but more especially to the first; and may be soon known by the foliage turning rusty, the flowers smaller, and in less quantities each succeeding year. With respect to watering, I should recommend a liberal supply at most times; and at the time the plant is making wood an abundant watering is of the greatest service both to the roots and over head, diminishing it as the winter draws on, and increasing again as the flowers open. These, with a temperate and regular heat—the same as for other conservatory plants—will, I think, ensure success sufficient to satisfy the most sanguine.

The remaining plants in this tribe are all very handsome, and most of them hardy. The principal among them is the *Azalea,* on which an article has already appeared in the *Florist's Journal,* so needs no repetition here; though I may just remark, some very ornamental varieties have been raised from this genus impregnated with *Rhododendron.*

The next is the *Ledum,* very pretty hardy dwarf shrubs, requiring the treatment of Ericas. The flowers of most of them are white.

Chamæledon procumbens and *Epigea repens* are both pretty little creeping plants, suitable for rock-work, but must be allowed a tolerable share of peat earth to root in.

The *Rhodora* (the type of the present tribe) is a well-known plant, and much admired for its rich purple flowers, which, like those of the almond, appear before the leaves.

The *Bejaria racemosa* is another exceedingly beautiful plant, and very sweetly scented; the flowers are of a blueish pink; it does best in strong peat, and requires a very liberal supply of water, being a native of the swamps of North America; a warm situation in the greenhouse is most suitable.

Here also is stationed the *Kalmia,* too well known to require any description, though few persons are aware of the deadly poison contained under so specious an appearance; yet a more beautiful object, or one that deserves better of the cultivator, is scarcely to be found among our North American plants.

ON FLOWER EXHIBITIONS.

In our Number for July, 1840, we intimated our readiness to insert authenticated lists of the successful flowers and competitors at the different flower shows throughout the kingdom, and we so far followed this out as to insert as many as our limits would admit. A correspondent has sent us a caution, or rather a hint, that it is necessary to exercise no small degree of judgment and discrimination in this matter. There are, he says, two kinds of flowers produced at those exhibitions: First, natural flowers, or those which are just as they grew, every care however being allowed to be taken in the growing of them; Secondly, mutilated or dressed flowers, of which nature produces the materials; but the shape, and probably the arrangement of the petals, are results of art. The Carnation and the Dahlia are the two flowers which are most subject to these fraudulent mutilations. " The dressing " of the former is an old story; and those who wish to see a highly graphic account of it had better read Mr. Hogg of Paddington's Treatise on the Carnation and other Flowers. We may remark, in passing, that this is the most delightful book on Floriculture in the English language. The instruction which it affords is authentic and admirable in itself, and clearly expressed. Then there is a charm thrown over the whole by incidental allusions and delineations of so fascinating a nature, that one who begins the book cannot leave off till he comes to the end, and then he shuts it with a regretful exclamation—" Is it done already ? " At page 8 of this treatise there is a full-length portrait of old Kit Nunn, the loquacious

In dressing the Dahlia a somewhat different mode of treatment is resorted to; the size, colour, and symmetry of the petals are easily obtained, and may be seen in many a cottage garden. The only point that remains for the florist is, therefore, what is called the perfection of the eye; and the maximum of perfection here is, that there should be no eye at all, but merely a central point around which the petals are arranged. Very choice blooms, in every other respect, are apt to be deficient here, and show a little spot of unchanged anthers in the centre of the flower. The dressing consists in plugging up this space with the central petals of another flower of the same colour, trimmed at the lower ends to such size and shape as may be wanted, and then stuck in with gum or some other adhesive matter. If the blooms come to the show in a very short time after the performance of this operation, the fraud does not tell so openly, and can be detected only by a close examination of the individual petals. But if a considerable time elapses the false petals begin to fade, and the fraud is detected at once. No longer ago than last summer, we happened to take a peep at an exhibition by a Society of considerable name in the purlieus of the metropolis;

and there we saw a pretty large tray-full of Dahlia blossoms labelled "Plugged in the Eyes, and unfit for Exhibition." Only one announcement more was necessary,—the name of the party placarded in large letters, or rather printed and distributed among the members and spectators. After this announcement, the offending party is not likely to have plugged the eye of another Dahlia; and others might have taken warning by his example.

These tricks must be known to the respectable part of the trade, who frequent these exhibitions; and therefore it is their duty, as well as interest, to put them down, to expose the tricks, and scout the parties out of their society. We believe that none of the very highest order of florists exhibit at those meetings. Indeed, except among a few of the older ones, florist's flowers have now become very second-rate objects with those at the top of the head of the profession. Something more new, nearer nature in its characters, and more costly, is what they seek. They do this for various reasons: in the first place, if they can afford the expense of collectors abroad, and proper houses, and skilful superintendence at home, these new subjects are far more profitable than common florist's flowers; and to those who know how to treat them, the expense is less rather than greater. In the second place, these new flowers attract a higher set of visitors than the old ones. This is partly owing to the love of novelty, no doubt; and it may be in part that it is not very wise, but still it is the fashion, and fashionable florists must follow that even though they discard a better one for the sake of it. In the third place,—and it is the most important of the whole,—there is far more scope for talent in the management of these new flowers. The old ones, however beautiful they may be, have all been improved by change, until change can improve them no farther; and therefore, he who seeks for novelty by the breeding of them, must be content with different flowers, not with better ones. But when the plant is new, fresh from Nature's own garden, and man has done nothing either to alter or improve it, the whole skill and labour necessary for this purpose belong to the individual florist who imports the specimen; and thus he has a far larger field of knowledge than presents itself to a grower of florist's flowers, even though he should grow all the species. Such are the study and labour requisite to know how the plant is to be successfully grown, and varied, and improved by hybridization or other means, that they are occupation enough for any man, whatever his talents may be;

and if he does not breed successfully and rapidly before he begins to sell, he greatly reduces his profits.

From these remarks, it will be seen that a new race of florists is springing up, superior, it may be, at least in the culture of rare and curious plants, to any that formerly existed.

Still, however, those plants and their cultivators are necessarily connected with the very wealthiest class, and thus they leave the ordinary florists and the exhibitions exactly where they found them. Those plants and exhibitions address themselves to the tastes and capacity of purchasing of the grand body of the people; and they will go on to increase, and to improve that love of flowers and their culture which has so beneficial an effect upon the morals of the people. In our small way, we shall do whatever lies in our power to forward this desirable object, fully convinced that thereby we should be rendering a service to the country. Those fraudulent dealings of which our correspondent complains, and which are but too well known to all who take an interest in flower shows, must, however, be put down by a general and complete exposure of the parties. If well-authenticated accounts of such are transmitted to us, we shall append them to the accounts of the shows; and if all our fellow-labourers would do the same, these practices, so injurious to the credit, honour, and success of the profession, would soon be at an end.

CALENDAR FOR MAY.

STOVE.—May is again a busy time with the florist. The plants in this department will now be growing fast; but if any among them should show signs of decreased vigour, it may be inferred the soil is not suitable, and should consequently be altered. Amaryllis and other Cape bulbs will most of them bloom this month; they require a good supply of water; the climbers will want constant attention. Fire heat is scarcely required, though on cold nights a little may be applied. Syringe frequently, though in doing so avoid wetting any flowers. A humid atmosphere is very essential at this season of the year.

GREENHOUSE.—Geraniums will now be fast advancing into bloom. The green-fly frequently attacks them at this stage of their growth. Fumigate them on a still evening. The plants should be quite dry when done. Repeat it twice or three times, and the plants will be rid of these pests. Cuttings may still be taken of Verbenas, &c. and the old plants turned out in the flower beds; the cuttings afford a good succession. Cuttings of Chrysanthemums should now be taken; they strike best under a hand-glass in the open border. Syringe frequently. Towards the latter end of the month, if the weather is warm, a little air should be left at night.

Flower Garden.—If the weather proves favourable, much may be done here this month, though the cultivator must be cautious in turning out tender plants, lest all his pains be lost. Dahlias may go out, as also all tender and half-hardy annuals. As soon as the tulips begin to open, they should be protected from rain and sun. Picottees, carnations, &c., in pots, should have the sticks placed before the roots get too large. Roses should be frequently looked over. Pick off the aphis and all crumpled leaves. Continue to repot Balsams, Amaranthus, &c. Increase the strength of the soil at each shifting. As soon as Cockscombs show flower they should be repotted, but not before. This keeps them dwarf. Auriculas as for last month.

THE WEATHER FOR APRIL.

The general character of the atmosphere for the month has been that of all the months of the year which have yet passed over—tranquillity, though April has been less tranquil than any of the preceding months, even those which contained the changes from most intense cold to a pleasant degree of heat. Near the beginning of the month, and again, more partially and with larger intervals, towards the close of it, there were cold days and keen winds from the northern half of the horizon, but chiefly from the north-east. These winds, though cold and piercing, had but few of the destructive qualities of east wind in the spring of ordinary seasons; or, at all events, vegetation was better prepared for their reception, so that the injury they did was smaller and confined to peculiar places; and, upon the whole, it was probably counterbalanced by good.

There are several points involved in this of which the common understanding, or, to speak more accurately, the common opinion, is exceedingly vague. It is usual to speak in general terms of blights as something that rides on the east wind, and shrivels and withers all sorts of vegetation; and also of other and more specific blights, which accompany this general blighting as its associates, and not its consequents; and which bring myriads of insects to prey upon that which the mere blighting wind has spared. These opinions are certainly prejudices; but they are prejudices upon matters of fact; and therefore they can be vanquished only by facts on the other side, observed without prejudice, and faithfully given to the public. This has not hitherto been done, and the proper data for the doing of it have not been fully and impartially examined; but we think that the present season is a favourable one for obtaining some knowledge of the matter.

The first point for our examination is, whether the east winds which had been partially felt during the April of the present year are of the same kind and have the same source with those blighting winds which often do such serious mischief in the early season. The answer to this points to the negative; for the east winds of the present season have been accompanied by rain, while the blighting east winds are dry. Hence we are led to conclude, that these east winds are home winds, and by no means calculated to do the same mischief as those cold and drying winds which come from lower Germany, Holland, and the other cold and flat countries on the opposite shores of the British sea.

Another point which requires investigation, and on which it would be worth while to spend some attention, is the occurrence of those visitations of insects which are so annoying to the fruit grower, as well as to other members of the grand society who cultivate the earth.

The general but erroneous opinion is, that the insects are brought by the wind; but so little ground is there for this, that the idea of the insects bringing the wind is equally tenable. If the insect is in a state of activity, that is, as a larva, it can get out of the way of the frost; and instead of cold wind having any tendency to bring it, the fact is quite the reverse. If the insect is in the state of an egg, or a pupa, then, and in that case, the vital principle cannot be destroyed by any accession of cold; for it will retain its vitality from many degrees below the freezing point to many degrees above that of the continual absence of snow. The fact is, that the very circumstances which have been supposed to be favourable to the growth and activity of insects are completely against them; and therefore, before we can arrive at any thing like an accurate view of the subject, we must form a different theory of the cause.

Insects are called into existence by warm weather, acting upon the general state of things, and exciting both the animal and the vegetable creation. If the air is peculiarly balmy, the development of insect life and the atmospheric action are both gainers by it,—that is to say, the insect verges to maturity, and so does the vegetable upon which the insect feeds. If the weather again becomes severe, the effect produced by the genial weather is suspended in the case of the plants; and the juices become thickened and saccharine, the very state in which they are most relished by insects. The consequence is, that when those east winds blow, all parts of vegetables subject to insect depredation are attacked by these little insects by myriads, and the blame of bringing the insects is attached to that which simply prepares their food; and would leave them to repose in their native indolence if such preparation were not made. The subject would, however, require more attention than we can afford to it, and hence we must delay it to a future occasion.

THE FLORIST'S LETTER-BOX.

Mr. Stanley is informed, that *Chrysanthemums* are plants very full of life; and therefore the common sorts grow readily almost in any soil and with almost any treatment. To grow in a successful manner the finer and more highly cultivated varieties, they should be placed in a compost of loam and peat, with a pretty large proportion of rotted manure and river sand. This, with decomposed vegetable matter instead of the manure, is the common soil of China; and Chrysanthemums grow there much in the same manner as ragweed in this country, only their roots are of longer duration.

In propagating, the best time for striking the cuttings is early in the summer, as they then get strong by autumn, and able to stand the winter. When the cuttings have struck, they should be potted in sixteens, and the size of the pots increased as the roots extend, so that they may always have plenty of pot-room. They should all along have a plentiful supply of water; and the pots in which they are ultimately placed should be twenty-fours. They are very hardy; and if they are not forced too early into bloom, they are very ornamental about Christmas, when comparatively few plants are in flower.

. CHORIZEMA CORDATA. 2, CHORIZEMA VARIUM.

THE

FLORIST'S JOURNAL.

JUNE 1, 1841.

ON THE CULTIVATION OF CHORIZEMA.

BY MR. P. N. DON, OF TOOTING NURSERY.

WITH AN ILLUSTRATION.

THIS is one of the most beautiful and interesting of the New Holland genera, beautiful as many of them are, and being all of them worth the cultivator's attention. The soil which I should recommend for this tribe of plants to be grown in should be, two parts turfy peat, one part light loam, and one part sand, with a little well-rotted manure. The whole should be well mixed together and cut with the spade, but should not by any means be sifted, as sifting, in my opinion, destroys the most valuable portions of the soil; and instead of the soil being porous, as it ought to be, it is rendered small and close. The more open the soil, the firmer will the plants grow, and the longer they will continue to grow with vigour; so that the stronger the fibre, and the more that is in the soil, the better for the health of the plants. In nature there is no such thing as sifted soils; for whenever we find the soil close and unporous, we never find the plants in a healthy condition; but when the soil is light and porous, we find the plants always strong and healthy. To those who wish to grow fine plants, I should recommend wide and shallow pots, as plants of this sort never go deep into the soil, especially if they can have plenty of surface room to run in. Many plants of this tribe are often lost by having too great a depth of soil; they extend their roots as well as they do their branches. The plants, when they have plenty of surface room for their roots, are generally low and bushy; but when they are short of surface room for their roots, they are weak and spindling, and almost destitute of leaves or branches. When potting, a few large potsherds should be laid at the bottom; and over them should be laid some turfy peat or the roots of the common fern, as that will form excellent drainage, and also prevent the soil from getting among the potsherds; and the roots, at the same time, would have to run amongst the loose pots or drainage. Great care should be taken in watering, especially in the autumn and winter, as the plants are then done growing, and the roots are in a state of repose. If much water is given at that time the roots will rot, and the plants will become sickly and very often go off; and if they live after the points of the roots are rotted off, it will be a long time before they recover themselves. I should therefore advise those who have the care of plants of this description, to be careful how they use the water-pot in the autumn and winter; but in the spring and summer they may have plenty of water. If the plants are well drained, I should never advise any person to turn them out of doors, but to keep them in the house or pits, and give plenty of air night and day, if the weather is mild; for if they are turned out of doors they often get scorched with the sun or drenched with rain, which are both very destructive of the health of the plants.

The best time to propagate this genus of plants is in the spring and summer; that is, when the young shoots have made about four to five leaves, or rather joints, that is, of the large-leaved species; those shoots destined for cuttings should be slipped off with the finger and thumb, as that brings the lower joint along with the cutting. Any bark that adheres to the cutting from the old wood should be taken off with a sharp knife; and the little knob, which forms the end of the cutting, will form the roots when the cutting is put in the pot. With regard to the small-leaved, or, rather, heath-leaved species, the cutting should be taken off when the young wood is about an inch and a half long; they should be taken off in the same manner as is recommended for the larger leaved species. In the pots in which the cuttings are to be put, at the bottom should be placed some potsherds; and over them should be some turfy peat, or moss, to prevent the sand from getting amongst the potsherds; the pot then should be filled up with very fine white sand, and gently watered, then pressed tightly down; and when it is firm, and well settled down, the cuttings should be inserted. All round the edge of the pot should be left as much room as will admit of a bell-glass being put on. They should be gently watered over-head before the glass is put on; they then should be placed in a gentle bottom heat, and the glasses dried every morning so as to prevent any damp lying about the plant. A little water should be given to them when they want it; great care should be taken with the shading of them, for if the sun touch them they will not recover it soon; the cuttings will strike in a short time, and when they are well rooted they should be potted off immediately into thumb-pots, and shifted as often as they require it, so that the plants never become stunted.

If care be bestowed upon this genus, it will repay the little trouble that is taken with it by a fine show of flowers. Where this tribe of plants is grown, as little fire as possible should be used, as they do not like artificial heat; but they would frequently do much better if they were kept dry and without fire for the most part of winter, and only a little used when the frost was severe. They are pretty hardy when kept rather dry; it is when the soil is wet that the frost hurts them, therefore when they want water, it is better to give the water early in the day, so that it may be dried off by night. In the spring, when the plants begin to grow, the house or pit in which they are grown should be kept rather close and warm, that they may get a good start, and that they may be enabled to make their growth as early as possible, so that their wood may be well ripened before winter. When the wood is well ripened in the autumn, a good show of flowers may be depended upon the following spring and summer. That the plants may be kept in good health, and without much fire heat, or rather without any, the water used for watering should be as near the temperature of the house in which they are grown as possible, or rather above than below it; for if they are watered with very cold water it is apt to chill the roots, and give a check to the plants, which they will not easily recover.

The species belonging to this genus are not very numerous, but all very beautiful, and well worth the greatest care and attention that can be given to them. I shall therefore enumerate all the species that I am acquainted with, which I think will be valuable to some, if not to others. I shall begin with the first one figured :—

Chorizema cordata (cordate leaved).—This is a beautiful species when well grown. The leaves are heart-shaped, of a dark green, and show spinous teeth all round the edge; the stems are very weak and slender; and the flower's spire is somewhat pendant, and proceeds from the apex of the shoots. The colour of the vexillum is bright orange, with a little yellow and red in the centre. The alæ, or wings, are maroon, and deflexed, or bent downward. The carina, or keel, is very small and straw-coloured, and tipt with red. The calyx has five teeth, and much shorter than the corolla, and somewhat spreading. A native of Swan River, introduced in 1836.

Chorizema ovata.—This is another lovely species; and when well cultivated, nothing can exceed it in beauty, being a little bushy plant, covered with large scarlet flowers; native of New Holland, introduced in 1830.

Chorizema triangularis (triangular leaved).—The flowers are scarlet, but not so fine as the last; native of New Holland; introduced in 1830.

Chorizema angustifolia.—This is the *Dillwynia glycinifolia.* The leaves of this species are very narrow; the flowers are yellow and red. It is somewhat of a climber; a native of New South Wales, introduced in 1830.

Chorizema Henchmanni.—This is one of the most beautiful of the whole genus. When in flower it is one splendid sheet of scarlet; that is, when the plant is well cultivated; but it is rather difficult to keep it any length of time; but, I believe, the reason of its dying off so soon is, that the plant has too much soil to grow in, and that the pots are too deep and too narrow. The soil being sifted is another reason why the plants do not live long; the drainage also is incomplete; that is, the stuff that is put over the potsherds is rather too fine. A native of New Holland; introduced in 1825.

Chorizema platylobioides, (platylobium-like).—This is a very distinct species, and at the same time a very pretty plant; the flowers are yellow; a native of New Holland; introduced in 1825. This is a very rare species.

Chorizema Spartioides.—This is a very slender species, and is also a climber; the flowers are large and yellow, and come in the axils of the leaves. This is rather a scarce species, and is rather difficult to grow, but is certainly well worth cultivating. A native of New Holland: introduced in 1836.

Chorizema spectabilis.—This is a magnificent species; the flowers are scarlet and orange; it is a climbing species, and in habit is nearly allied to *Rhombia,* but is a more abundant flowerer, and is easily cultivated. The flower spikes are pendant, and produce from five to ten flowers on a spike; introduced in 1836, and flowered in 1841. A native of New Holland.

[From what cause does the one at first become fruitful, and how does it retain the habit?—This is bad philosophy.—Con.]

We have been long acquainted with two St. Germain Pear-trees of this character; both are trained on a west wall, and next to each other, at the distance of twenty feet from stem to stem. In volume they are very much alike, having both covered their allotted spaces of the wall; and both are equal in size and number of branches. Had the barren tree been of stronger growth the enigma of its yielding no fruit might have been accounted for; but it does not appear that this is the case.

Perhaps there is some defect in the male parts of the blossoms, as happens to those of some other sorts of Pears; and which may be remedied by what the late T. A. Knight, Esq. suggested, viz. to suspend branches of other sorts, while in flower, over the blossoms of the barren tree. The late Mr. Sweet discovered that hothouse or greenhouse plants, which flower in winter, and of which seeds are required, seldom ripen them if the flowers are not impregnated by hand. And this seems a very rational expedient; because in the open air flowers are naturally impregnated either by the wind or by honey-seeking insects, whereas, in a house, flowers have but little chance of having their pollen blown or carried from one to the other, by either wind or insects; and therefore manual assistance is necessary, particularly in stoves.

But to recur to the barren and fruitful trees of the same kind, met with in every garden: it is a fact universally known, that those of a luxuriant habit, whether proceeding from too rich or too damp a soil, or from too much pruning or cutting-in to keep the head on a limited space, never can be abundantly fruitful: and hence the question with which we set out—How does it happen to be so; and can any reason be given to explain it?

This curious circumstance is not confined to fruit-trees only: if the florist wishes to have a fine bloom from his bulbs and tubers, instead of keeping them constantly excited, as they would be in the open air in this temperate climate, where there is no torrid heat to arrest their summer growth, he takes them out of the soil entirely, and keeps them dry till planting time. So to insure a good bloom of the *Cereus*, or *Cacti*, they are placed during summer close under a south wall, there to be kept dry, and scorched by the sun to produce a stagnation of their growth, and cause a healthy development of flowers, which, were the plants kept in a growing state, and treated with water, would either fall off unopened, or be produced into shoots.

This precocity of flowering or fruiting may be brought about by many other means known to florists and gardeners. Over-drying seeds — starving a seedling — frequent transplanting — ringing or strangulating a stem or branch — grafting the mature shoots of the top of a tree upon a shoot nearer the root, or upon a young stock—are all practices which expedite the flowering and fruiting of cultivated plants, whether herbs, shrubs, or trees.

Now, we are all pretty well acquainted with these effects, but there are many different opinions as to the causes. If we take into consideration the parts and constitution of the generality of plants, we see them composed of a root, a stem or stems, leaves, flowers, and fruit. The last is the principal and final effort of the plant, or of that part of the plant which is destined to bear or support it. From the moment the seedling springs from the ground it passes through its various stages of growth till its reproductive organs are mature, when, if it be an annual, the whole individual dies; if a herbaceous perennial, the summer stems only die when the seed is ripe; and in the case of shrubs and trees, whose stems are permanent, their foliage, their flowers, and their fruit or seeds are annually renewed from buds, each of which may with great propriety be considered in the light of a distinct individual plant, for they possess all the parts and properties of a young plant. But buds are of several descriptions on the Pear-tree: there are what are called leaf-buds and flower-buds; the former are known by their more slender and pointed shape; the latter, by their larger, and more rotund form. Leaf-buds are expanded into summer-

A leaf-bud may be aptly enough compared to a seedling tulip; its first year's growth consists of a single leaf; in the next year, the still tiny bulb may produce two or three broader leaves; every following year, up to the fifth or sixth, larger leaves only are produced; and on the sixth or seventh, besides leaves, comes forth a first flower: so the leaf-bud of a tree, it seems, requires two or three years' stationary preparation before flowers seated in the centre are developed. But on these same trees we sometimes observe, on very luxuriant shoots, perfect flower-buds formed in one summer, and particularly at the point of the shoots of both Apple and Pear-trees.

There are other descriptions of buds, especially those of the natural order *Amentaceæ*, namely, those with male and female flowers, which are separate and distinct; the first usually expanding before the second, as is so evident on the Hazel, Poplar, &c. These flower-buds are either lateral or terminal, and sometimes both are produced from the point of the shoots. Thus it appears that the fructiferous organs of every different plant are variously placed in the system, and are exhibited at that stage of the growth when by the influence of the season they are rendered sufficiently mature.

From the preceding observations it appears, that the fructification is not only variously situated on the membranous structure, but has visible identity for periods of more or less duration, accord- to the constitution of the plants. By the dissection of bulbs, tubers, and flower-buds, the flowers and foliage of the following year are plainly discernible; and if it were practicable to divide such a plant as the *Agave Americana*, ten years before it would naturally flower in this country, there can be no doubt but that the embryo flower would be visible in the centre.

This idea presupposes that all the parts of a vegetable have rudimental existence, and that they are developed in the order of their position in the system. This, perhaps, is the oldest and most generally-received opinion relative to this branch of botanical knowledge. But a belief of it does not satisfy our mind respecting the question at the beginning of this communication; because by reference thereto we cannot explain why one tree is fruitful, and another barren.

Much has been written and said on the question; and it was set at rest by one party of philosophers, who believed that the elaborated sap was convertible into all the different organs of the plant, and particularly into those of flowers and fruit. And in order to arrest this same elaborated sap in the branches, every plan of reversing, or ringing, or strangulating them, is advised to prevent it sinking to the roots. Of course it is believed that neither flowers nor fruit can be generated or formed in the buds of a plant unless perfect sap is present; and the greater the store the more numerous are the flowers and fruit. This fruit-producing sap is compounded by the agency of the leaves; so that without leaves there can be no elaborated sap; and without this last, there can be neither flowers nor fruit. So that the presence or absence of fruit is easily accounted for by assuming, that the perfect sap is more or less abundant. This theory was first propounded by the late T. A. Knight, Esq., President of the Horticultural Society of London, and has been very generally adopted.

But the question has been answered in another way: it is first of all presumed, that the leaves, flowers, and fruit are all of the same substance, and that they are either one or the other according as the growth of the plant is more or less luxuriant. When plants are young, or even in old age, if in a vigorous habit of growth, strong shoots and leaves only are produced; but if by any means the growth becomes languid, and the shoots stunted, whether by art or accident, instead of the powers of the plant being exhausted in the production of barren shoots and leaves, these last are transformed into flowers and fruit. Thus, by metamorphosis, the leaves

It is somewhat remarkable, that the metamorphosis of the different parts of plants into each other, should have been discovered as an invariable process by the German poet Goethe. His ideas, however, lay dormant for a considerable time, but were at last embraced by the eminent Professor De Candolle, of Geneva, who has been followed by many talented botanists, both in this country and on the continent. The consideration of such a doctrine has certainly an astounding effect on the minds of those who have long cherished very different opinions as to the distinct and different organs which compose a plant. These different members appear to have different functions in the system; and we flatter ourselves that we know somewhat about these members, and their functions; but that branch of botany, now called Morphology, nullifies many of our prepossessions, and turns us back to the lowest forms of the school, thence to rise again as we best may. It is not without some feeling of regret that we are obliged to surrender our former tenets, and, moreover, to witness so many of our old and honoured preceptors thrown into shade, and their precepts consigned to oblivion.

This new doctrine of Vegetable Morphology, when more fully explained,—and when those changes of the floral members into leaves, and *vice versâ*, are proved to be *constitutional*, and not *accidental* mutations,—may be of some practical value, and applicable in floriculture as well as in orcharding and other branches of gardening. At any rate its adoption will banish several fanciful notions promulgated by some earlier botanists. President Knight's theory will be entirely swept from the science; and the day-dreams of many of his disciples must share the same fate.

There are several objections which may be urged against the poet Goethe's opinion; but these shall be brought forward at some future opportunity.

OBSERVER.

April 2, 1841.

ON THE CHARACTERS, VARIETIES, AND CULTIVATION OF CATASETUM.

BY MR. P. N. DON.

(*Continued from page* 110.)

CATASETUM TRIDENTATUM—is one of the abortive forms of *cristatum ;* the sepals and petals are green, finely spotted with brown ; the lip is saccate at its base, being sometimes dark-coloured, and at others of a beautiful yellow ; the column is somewhat of the form of *cristatum,* but the appearance of a bird is not so well defined as in that. The anthers have the singular power of throwing themselves to a distance when touched ; and they have also a glutinous matter at their base, which makes them adhere to any thing that they fall upon, which, in fact, is the case in all this tribe of plants. It seems to be a provision of nature. When the pollen is perfect, the anthers are then thrown back upon the stigma, and the glutinous matter at the base, when the flower is not touched, prevents the anthers from being thrown out, which would be the case if it was not for the glutinous matter. When the anthers are thrown back, the pollen is then scattered over the stigma. The column is the seed-vessel ; and when the plant is about to perfect its seed, the peduncle begins to swell, and the flowers become persistent on the top of the seed-vessel. A native of Demerara—introduced in 1823.

CATASETUM FLORIBUNDUM—is another variety of *cristatum,* and very near *tridentatum,* but the flowers are closer set on the spike and do not open so much as *tridentatum ;* and the spotting is smaller, but in every other particular they are very like. There are a great many other varieties of *tridentatum,* differing in form, and more particularly in colour, but all very beautiful and well worth cultivating. A native of Brazil—introduced in 1823.

CATASETUM DELTOIDUM.—The lip of this species is formed like the Greek delta ; hence its name. It is a very curious species ; the sepals and petals are of a dull lurid green, as well as the lip. This species has no colour to recommend it ; but its curious shape will at once attract the notice of those who are lovers of the singular forms of nature. A native of Demerara—introduced in 1834.

Catasetum luridum.—This is another most singular species; the sepals and petals are light green, spotted, or rather, dotted with purple. The lip is much longer than the sepals and petals, and of a lurid green; the column is very small in this species, and has, as well as in the others, the form of a bird; the external appearance of the flower is that of the lower portion of a monkey's head, with the under lip projecting beyond the upper one; the spike is somewhat pendent from the weight of flowers. A native of Brazil—introduced 1832.

Catasetum semiapertum.—The flowers of this species are nearly or altogether closed, and the portion that is open has the appearance of a small shell with both edges crimped; the whole flowers and plant are of a pale green; the spikes of flowers are very large, and rather handsome; the flowers are numerous on the spike. A native of Brazil—introduced in 1825.

Catasetum purum.—This species is very nearly allied to *semiapertum,* but differs in the size of the flowers and that of the pseudo-bulbs; the whole flower is of a pale green, with the sepals and petals lying close over the column; the lip is also very small, and is without the crimping that is to be found in *semiapertum.* A native of Brazil—introduced in 1824.

Catasetum barbatum.—This is another beautiful species. The lip is covered with a beard of a pinkish colour; and each of the hairs is about the size of a small needle, and nearly half an inch long; the sepals and petals are finely spotted with dark brown; the colour of the sepals and petals is pale green. This belongs to the open-flowering species of *Catasetum*, or rather, the *Myanthedes*, or that portion of the genus resembling flies, as they throw the sepals and petals up so that they have the column and the lip perfectly free. A native of Demerara; introduced in 1834.

Catasetum cernuus.—A very fine species. The spikes of flowers are nodding, and are very beautiful; the sepals and petals are green, spotted with purple; they are thrown open as in the other species of *Myanthedes.* This is a species well worth cultivating; in fact, I should recommend them all to a selecter of orchideous plants, for such of the species as are not beautiful in colour, are compensated by singularity of form, which most of the species have. A native of Brazil; introduced in 1832.

Catasetum laminatum. — This is a most splendid species. The pseudo-bulbs are short, and covered over with white scales.

It also belongs to the open-flowering species, or rather, to the true species. The flowers are large and handsome; their colour is a blueish grey. The lip is very singularly formed, having a ridge along the centre of it, and being somewhat concave on the under side; and it has the appearance of being folded together, and as if one of the folds had risen higher than any of the others. A native of Mexico; introduced in 1840.

Catasetum maculatum. — In my opinion, this is nothing more than the abortive form of the above species; but as it is described as a species, we shall speak of it as such. The pseudobulbs are short and thick, like those of *laminatum;* the flowers are large, and beautifully spotted with brown; the sepals and petals are green and white; the spots are very large; the lip is saccate at its base. The flowers of this variety are more open than in the varieties of *cristatum;* at the upper edge of the saccate portion of this species or variety there are no teeth as in *tridentatum*; there is also a number of varieties belonging to this, as well as to *tridentatum;* some are larger in their flowers, and some are smaller, as well as differently spotted; there is one variety almost green, dotted with purple, and it is smaller than the true *maculatum.* A native of Mexico; introduced 1836.

Catasetum Hookerii.—This is another fine variety, for a species I cannot think it is, because it has every appearance of *tridentatum,* but differs from that variety in the form of the flowers. In a genus like this, little dependence can be placed on the forms of the flowers, as far as regards specific difference, unless those plants produce seed, and every one of the seedlings come like the parent; then it ought to be considered a species, but not otherwise. A native of Brazil; introduced in 1816. The colour of the flower is yellow and purple.

Catasetum viridiflorum, (*green-flowered.*)—This is only a variety of *luridum,* with green flowers; though published as a species in the Botanical Magazine. This at once shows what a confusion is produced by constituting species and genera without sufficient grounds. A native of Demerara.

Catasetum poriferum, (*pore-bearing.*) This is, again, another variety, with pores or small holes, as if it was pricked with a pin. The colour of the flowers is green and purple. A native of Demerara; introduced in 1837.

Catasetum Milleri. This appears to me to be only a variety of *tridentatum*, with differently coloured flowers. A native Demerara.

Catasetum viridum. This is the *Monacanthus viridis* of Lindley; but it is, in fact, no species at all. This was only a form of the *Catasetum tridentatum*, and it is only a form of *Catasetum cristatum*. There is also a crested variety of this *Catasetum discolor*, which is the *Monacanthus discolor* of Lindley; but it is nothing more than the *Catasetum cristatum* in a very different form. *Catasetum fimbriatum.*—This is the *Monacanthus fimbriatus* of Lindley. This is not even a species, but only a variety of *Catasetum cristatum*. They are natives of South America; introduced from 1837 to 1838. All well worth cultivating, from the singular forms of their flowers; and also some of the colours are striking.

Catasetum atratum—is a very dark-flowering species. It is nearly related to *tridentatum*. I think this is a pretty good species; but if it is not, still it is worth cultivation, and ought to be in every collection, as well as the two above-mentioned species. The leaves and habit of this plant are that of *tridentatum*. A native of Demerara; introduced in 1833.

Catasetum longifolium.—This is a very distinct species. The flower-spikes are pendulous, and the flowers are shaped like little pitchers; the leaves are very long and narrow; the pseudo-bulb is not very large, but very short. This species is easily known by its long and slender leaves. A native of Demerara; introduced in 1835.

Catasetum Citrinum.—Another very distinct species; the spikes of it are somewhat pendulous; the flowers are citron-coloured; they also have an agreeable smell; the leaves are narrow, but not very long, and of a whitish green, or rather what is called a sea-green; the pseudo-bulb is somewhat compressed at the base of the leaves, and there is a rusty appearance, which at once distinguishes the plant from all the others. A native of Brazil; introduced in 1834.*

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* In watering the plants, the water ought never to be below the temperature of the house; for if they are watered or syringed with water much below the temperature of the house, they will receive a severe check, which they will not recover from the greater part of the year—if indeed they do not damp off. I should recommend syringing about twice or three times a week if the weather is hot.

ALLIED GENERA.

CYCNOCHES LODDIGESII.—This is the swan plant, and a most singular genus it is. The flower is in form like a swan: the column forms the neck, and the lip the breast and the other portion of the body. This genus comes near *Catasetum* in habit, and only differs from that genus in the forms of the flowers, and also in its mode of flowering. The flower-stems come out on the upper part of the pseudo-bulb, instead, as in *Catasetum*, from the base. I think this genus ought only to be a sectional division of *Catasetum;* and I have no doubt but that it will prove, one day or other, to be only a division of that, instead of a distinct genus; for it has shown some inclination to sport, as I once saw it, with a double flower, but not a double peduncle. The sepals and petals are of a dull green, spotted with brown; they are thrown quite open, so that they leave the lip and column perfectly free, and the flower has the perfect appearance of a young swan with its wings up; the lip is white, and dotted with brown. This requires the same treatment as *Catasetum.* Native country, Surinam; introduced in 1830.

CYCNOCHES CHLOROCHILON.—This is another most singular species of this curious genus. The whole flower is green, and it has a very strong smell of the rhubarb of the shops; the lip is large, and the column is small in proportion to the flower; as every part is very large but the column, the flowers are nearly double the size of *Loddigesii;* the sepals and petals are thrown back like the other species. This has, in my opinion, a stronger resemblance to a swan than the last. A native of Demerara; introduced in 1838. This also requires the same treatment as *Catasetum.*

CYCNOCHES VENTRICOSUS.—This is another beautiful species, and also very distinct from the other two. The flowers are smaller than the last species, and of a yellowish green colour; and it has the same smell as the dark species: the lip is more gibbous than in the other two species; hence its name: the sepals and petals are thrown so much back, that they touch one another. The resemblance of this species to a swan is very perfect. A native of Guatemala; introduced in 1835. Requires the same treatment as *Catasetum.*

Cycnoches Maculatus.—I believe this is not any thing more than a strong-growing variety of *Loddigesii*. The spots are much larger than those of *Loddigesii*, and more distinct. This, as well as all the other species, ought to be in every collection, or rather, selection of orchideous plants. This is a native of Demerara.

Mormodes atropurpurea, (*dark purple*.)—This is another genus, very nearly allied to *Catasetum*: the column of it is twisted in a most singular manner; hence the name *hobgoblin*, which this generic name implies. This is only another sectional division of the genus *Catasetum*, instead of a distinct genus. This species is a native of the Spanish main, introduced in 1834. The spikes of the flowers come from the base of the pseudo-bulb, as in *Catasetum*, and the spikes are upright; the flowers of this species do not open very wide; the whole flower is dark purple. This genus requires the same treatment as that of *Catasetum*.

Mormodes pardina.—This is a beautiful species of a singular genus. The flowers are much larger, and are beautifully spotted with purple on a yellow ground. The spikes of flowers are very large, and the flowers also are very large; the column is much larger, and the twisting is more distinctly seen, and the flowers are more open; the lip, as well as the column, is twisted. A native of Mexico; introduced in 1836. This also requires the same treatment as that for *Catasetum*.

Mormodes buccinata.—This is not so handsome a species as the last, but is still worth cultivating. The whole flowers are brown and spotted with purple, or rather, dotted with purple; the flowers are not nearly so large as that of *pardina*, but larger than that of *atropurpurea*; the leaves of this species, as well as the pseudo-bulbs, are dark green; in that of *pardina*, the leaves are glaucous green; while the pseudo-bulb is somewhat ferrugineous, or rusty-coloured. A native of Mexico; introduced in 1839. This also requires the same treatment as the others.

Cyrtopodium Andersonii.—This genus in habit is like *Catasetum*, but much larger; and the pseudo-bulbs are more round, and at the same time more elongated; the spikes of flowers are branching, which is not the case with those of *Catasetum*, nor in any of the other genera allied to it; the flowers are not very large, but are numerous on the spike, and for the most part yellow or straw-coloured. The flowers of this species are yellow; the sepals and petals are of a paler colour than the lip; the column of this genus is very small; there are several varieties of it, some with smaller flowers, and others with different coloured ones; and some of the varieties differ in habit, as well as in the flowers. This genus requires larger pots than those for *Catasetum*, but they require the same treatment. When they are grown to perfection, they are very beautiful, but we seldom see them in flower; the reason of which is, that the plants are kept in too moist an atmosphere in the resting season. As soon as they have completed their pseudo-bulbs, they should be immediately removed out of the growing-house into the resting-house. This species is a native of the West Indies, as well as of Demerara; introduced in 1804.

CYRTOPODIUM GLUTINOSUM.—This is rather a pretty species. The flowers are smaller than those of *Andersonii*, and of a paler colour; the bracts are glutinous as well as the flower-stems. A native of South America; introduced in 1825.

CYRTOPODIUM FLAVESCENS, (*yellowish.*)—This is a very distinct species, and well worth growing. The flowers are large, in habit like the two preceding species. A native of Mexico; introduced in 1830.

CYRTOPODIUM PUNCTATUM.—This is a beautiful species, being, in my opinion, the best of the genus. There is a variety of this species without any spots, so that it cannot be easily distinguished from the other species. A native of Venezuela; introduced in 1834.

CYRTOPODIUM FILOSUM.—I should question this being any thing more than a variety of *Andersonii*. A native of Venezuela; introduced in 1831.

EPACRIS.

IN answer to a "New Subscriber," who wishes to know the reason his Epacrises are losing their foliage, and some of them dying, I will briefly state the treatment I have found most conducive to their well-being, and so give him an opportunity to draw his own inferences, though I may first mention one or two causes very likely to produce the effects he describes. First, were the plants thoroughly protected from frost during the late

The Epacris is a native of Australia, where it is generally found growing on the sides and at the tops of mountains of very considerable elevation; consequently it requires a free supply of pure air, and the full influence of the sun during the winter and early spring months; but in an artificial state, as it is with us, it requires some protection from frost in winter and the scorching effects of our summer's sun; as, when turned out with other plants, in June, the roots, which are very fine, and by that time generally close to the pot, are frequently injured to such a degree, that it is scarcely possible to recover them by the heat imbibed through the pores of the pot. To obviate this, some recommend them to be repotted into larger pots just before they are turned out of doors; but as I consider over-potting to be nearly as bad as the effects of the sun, I prefer placing them closely together in a cold frame, with a west aspect and in an open airy situation; or, if the plants are wanted for grouping or other ornaments, I surround the pots with moss, which I find keeps them cool and moist; and by attention to watering, a luxuriant growth may be kept up all summer. About the beginning of August keep them rather dry, and with a little more sun, so that the wood may ripen well; for on this depends the blooming. Remove them into the house rather early than late, always placing them in an airy open situation, among Ericas and other plants of similar habit. During winter great care is necessary in watering. It should be given in small quantities, just sufficient to keep them moist, and no more. Also, avoid the extremes of both heat and cold. The best season for repotting I find is immediately after flowering, though I never do it till the pot is quite full of roots. The best soil is a mixture of peat and sand. The peat should be free and rich; and in potting place a few rough pieces at the bottom of the pot, over the potsherds, of which there should be a good quantity. The sand should be *silver sand*; no other kind is fit; and about a third of the quantity of peat used in mixing. Run them through a coarse sieve, and then stir them together with the hand till the whole appears of a greyish colour. In potting, shake the earth well into the roots, pressing it down firmly with the finger and thumb; and give a gentle watering.

This is about the whole of the treatment necessary, and which, if a "New Subscriber" adopts, I doubt not his plants will recover, towards which he has the best wishes of

R. PLANT.

THE FLORIST'S LETTER-BOX.

ON THE PROPAGATION OF CARNATIONS AND PINKS.

TO THE EDITOR OF THE FLORIST'S JOURNAL.

ALTHOUGH there is nothing new in these remarks, still, as the following mode of propagation of these flowers is seldom recommended in any directions for their cultivation, I may perhaps be excused for writing a few lines upon so hackneyed a subject.

My stock of Pinks is small, and it is therefore an object to me to raise as many by pipings as I can. I endeavoured for one or two years to strike the pipings, cut off at a joint, under a hand-glass in the shade; but I found my attempts were not attended with success: the slugs and worms made sad havoc with some, and damp destroyed many others; add to this a soil not well calculated naturally for growing the Pink, and it will be no wonder that my stock rapidly decreased. This made me more chary of what were left, and I therefore determined to try some other method. I made a hole in the bottom of a flower-pan, which was about an inch and a half in depth, for drainage, and then filled the pan with equal parts of sand and light rich soil. Having cut my pipings with a sharp knife at a joint in the usual manner, I inserted them in the soil, and gave them a good watering to settle them, and placed the pan on the flue of a pit. In winter, I gave them no more water than served to keep them in health; and when April came, I found that I had not lost one piping. At the beginning of that month, I transplanted them into the border: they had formed good roots, and were bushy, and not at all drawn up; the latter circumstance may, I think, be attributed to the roots quickly reaching the bottom of the pan, and then spreading laterally. I think it right to add, that the colour of the flowers was not at all the worse from this method of propagation, which I have now tried for the last two or three years with equal success.

As to the notice stating the beauty and length of the spikes, in flower at the same time, of *Erysimum Pereskiianum,* see *Harr. Flor. Cabinet* for December, 1839, and the plate in the same number,—although you have shown Mr. H. very clearly to be no authority.

I shall be obliged by your informing me, in your next "Letter-box," the best method for encouraging the growth of moss on a grass plot in a low situation, where the best hill turf very soon changes into very coarse grass. Also, as to the best method of growing, and the colour of *Lisianthus Russellianus.*

The *Crassula coccinea,* the cause of the failure of which you so well explained in your first "Letter-box," has now recovered, and is showing well for blossom, and the side shoots taken off bid fair to be strong plants.

R. W. B.

NOTE BY THE EDITOR.—*Lisianthus,* or rather *Eustoma Russellianum,* is a hardy annual, a native of Texas; and therefore it requires nothing further than the ordinary treatment of hardy annuals,—to be put in good mould well pulverized.

R. W. B.'s other question is rather a curious one; the object of most people being to keep moss off grass plots, and not bring it on. To bring moss anywhere, the plan is, to give the place where it is desired a sprinkling of the soil immediately under the growing moss of the kind wanted, and then to keep the surface moist and occasionally under a small depth of stagnant water. The water must not be allowed to flow over it, otherwise it would wash away the sporidæ of the moss; and it must not be allowed to stand too long at a time. We suspect, however, that if the plot is so low and humid, as to change hill grasses into coarse meadow ones, the bringing of moss upon the surface would be the first step towards a bog. Therefore, a better plan would be to secure an under-drainage, by a porous stratum under the turf, to prevent the water from stagnating on the surface, and so to preserve the hill grasses, if possible. If the creeping white clover is not objected to, sowing the surface with river sand and a little peat earth will secure that, sometimes without the expense of any seed.

FLOWER SHOWS.

HORTICULTURAL SOCIETY OF LONDON.

ON Saturday, May the 15th, 1841, the first Show of the season was held at the Horticultural Gardens, Turnham Green. The day being propitious, a large assemblage of the nobility and gentry attended. It was pleasing to observe the great delight taken by them in admiring either the horticultural productions exhibited in the tents, or the beauties of nature when promenading the gardens. As it is the public rendezvous for all the great fashionables, the array of splendour and beauty was quite delightful to look upon, particularly the ladies, as—

> Without them, what scene could be gay?
> Without them, what heart could be glad?

As my object is to notice the plants, I must, in the first place, object to the plan of exhibiting plants without the name being attached to each specimen in a conspicuous manner. There were dozens of plants, many rare and beautiful, without being named, which caused long delays in the onward movement around the tents; many ladies and gentlemen, anxious to know the names, stopped to inquire of the first person most likely to be acquainted with them, when a note was generally made in the memoranda books to order it from their nurseryman. At horticultural shows on the continent, printed catalogues are sold for about sixpence, and all the plants being numbered, easy reference is made; or all are labelled with the names.

The collections of Geraniums deserve first attention; they were well grown, but it would be difficult to judge of the habits of the plants, as they were so well dressed and staked for the occasion:—

Geranium—Jervis is an orange scarlet, with fine black spot on upper petals.
Una, white, with scarlet crimson feather.
Coronation (Garth), upper petals scarlet crimson, with extra fine spot, lower petals splendid rose.
Victory (Garth), upper petals rich dark crimson, lower petals blush white.
Erectum, beautiful scarlet crimson, with black spot.
Discount, fine rosy purple.
Cecilia, white, upper petals pink shade.
Beauty of Ware, rosy purple, fine large truss.
Climax, rose, with fine dark spot.

There were three good seedling Geraniums from Mr. Gains; one from Mr. Field; and three or four others, possessing no properties particularly striking or beautiful.

The Erica (Heaths) were the admiration of all persons; they are valuable for the varieties of colours, and for many of them being in flower to ornament the heathery or conservatory at all seasons of the year. The following were conspicuous for their beauty:—

Erica depressa, green.
elegans, pink and green.
perspicua, white.
vestita alba.
gemmifera, transparent red.
vestita fulgida, red.
lineoides, superb pink, white mouthed.
bruniades, pink, woolly, black mouthed.
colorans verna, pink and white.
odora rosea, white, bell shape.
cerinthoides, red corolla, hairy.
aristata major, white mouth, deep scarlet, tubed corolla.
linea, fine white, tubular.
melastoma, green, black mouthed.
Erica propendens, bell flower, a perfect picture.
paniculata alba.
ignescens, fiery.
intermedia, fine white.
Hartnellii, glutinous, transparent deep crimson.
Patersoniana, fine yellow.
transparens, light pink.
purpurea, purple.
suaveolens, rose.
vernix, transparent red.
Templeana, rosy flesh.
fastigiata, yellow.
seedling, good, like Andromeda flora.

The Heartsease were many and various. The lover of these pretty and cheap flowers could feast his eyes on hundreds, in which were displayed nearly all the hues of the rainbow:—

Heartsease, (Brown's Countess of Orkney)....A pretty yellow; the two upper petals deep purple, and the others tipped with purple.
Midas is a fine round thick petalled yellow.

As the description of many other good ones would be too long for your pages, I will give you my notice of the Orchideæ plants:—

Trichopilia tortilis is a white flower, with brown spots; upper petals brown, with green edgings curled.
A New Oncidium from Trinidad; a small flower, but prettily spotted pink.
Aerides odorata (Air-plant), with two long racemes of white flowers closely and handsomely speckled with pink.
Oncidium stramineum; lightish yellow, with pink spots.
Cattleya labiata; pink.
    Mossiæ, with its rich velvety carmine labellum.
    New Species; brown and yellow, with pink.
Oncidium luridum guttatum; dark brown, with deeper spots.
    pumillum; pretty free flowering yellow.
    species from Honduras, very dark brown.
    species from Guatemala, upper petals brown, labellum yellow.
    divaricatum, brown and yellow.
Acanthophippium bicolor; yellow, pink mouthed, over one hundred flowers expanded in one plant.
Epidendrum patens; white.
Maxillaria Deppii; brown, white, and spotted yellow.
Vauda Teres; a beautiful flower; the labellum pink; the lower petals white; the upper pink, with spotted stripes.

The AZALEAS were generally fine, particularly the—

AZALEA—Indica alba.
    Danielsiana; bright salmon orange.
    lateritia; a beautiful habit of growth, and so closely covered with red flowers.
    variegata; white, pink stripes.
    phœnicea; purple.
    Gledstanesii; white, with a deep pink stripe on two or three of the flowers.
    rubra flora pleno; a fine large specimen; double red flower.

There were many large plants of Azaleas, that, by their blanched appearance, showed evident signs of having been kept back for the Show, which will materially affect their future well-being.

The beautiful varieties of CALCEOLARIAS were generally admired. Some yellow, others purple, and several scarlet; many of them spotted all over with various distinct colours.

Several TROPŒOLUM TRICOLORUM, on fancy wire trellises, looked like ruby pearls on a carpet of green. The following were conspicuous as beautiful specimens:—

Euphorbia splendens; scarlet.
Combretum purpureum; scarlet.
Cytissus filipes; flowers white, branches pendulous like a weeping-willow.
Gardenia florida; two large plants; the numerous white flowers deliciously fragrant.
Several varieties of Chorizema varium.
Peustemon Murryanum; a fine bright red.
Rondeletia speciosa; generally of straggling growth, but looked well on a round trellis.
Elichrysum humile; pretty pink, full of flowers.
Dionæa muscipula (Venus Flytrap) is curious, but a poor white flower.
The Ixora coccinea were fine.
Gompholobium versicolor, on trellis, was handsome beyond description.
Euthales macrophylla; a pretty yellow orange flower, but straggling in growth.
A corymb of cut flowers of Fuchsia Youellii was a good, but not very distinct variety.
The Noisette and China cut Roses, from Mr. Lane, were fine.
Planted in the large conservatory, Pimelea spectabilis, with many umbels of starry pinkish white flowers, looks beautiful.
Canna iridiflora, with purple pendulous flowers.
Callistemon viridiflorum.
    squarrosum, yellow.
Diplopeltis species, pink.

The other plants, on shelves, plunged in moss, looked sickly. As it is not my object to enter into a disquisition on the advantages and disadvantages of cast-iron curvilinear houses, to prove that the latter would much overbalance the former, I will conclude with a notice of the fruits:—

One dish of Black Hamburgh, with fine bloom on them, was excellent. Another dish from Sir Simon Clarke's, very large berries, but not well covered.
The Royal George Peaches, and Elruge Nectarines from the Duke of Devonshire, were very fine.

Two branches of Fairchild's Nectarines were curious.
A good dish of Sweet-water Grapes.
Several middling-sized Pine Apples.
Buck's Seedling, eighteen or twenty inches long, tapering to the top.
The Melons were many and good, thanks to the fine sunny March weather.
A brace of Weedon's Cucumbers were young and fine.
There were six other Cucumbers, very long and round, but how it was managed to keep the bloom attached to specimens assuming the yellow hue, I cannot divine.
The dishes of Cherries and Strawberries were good; and a dish of Figs of various sizes.
The Apples and Pears were but middling.

The principal prizes were taken by the great growers, who exhibit the same plants, increasing in size every year; but we think the collection from the neighbourhood of Bromley will, in a few years, rival the others in size and beauty.

CALENDAR FOR JUNE.

Stove.—Most plants here will now be flowering, consequently the syringe must be dispensed with; and as we cannot refresh the plants in this manner, it becomes necessary to prevent the evaporation of what little moisture we may be enabled to give them over-head. This is best done with an awning, as it is both beneficial to the plants, and also prolongs their beauty. Cape Bulbs that have done flowering should have their water reduced. Erythrinas may be removed to the Greenhouse. Gesnerias, &c., should have frequent waterings over-head. Repot Triveranias. Propagation may be carried on with much success this month. Water free-growing plants twice a-day; others should have a good supply every evening. Fire is not requisite now; air should be given on every favourable opportunity.

Greenhouse.—Towards the end of the month, all New Holland and other plants, intended for grouping, or otherwise, should be removed out of doors. Ericas, Epacris, &c., should have the pots protected from the sun; care should be taken that they do not get dry. Gloxinias require syringing every day, till they blow. Chrysanthemums may yet be struck; as the plants are removed out, the vacancies may be filled up with balsams and other tender annuals. Climbers must be attended to constantly; a little air may be left all night when the weather is warm. Oranges should have a top-dressing of rotten manure. As soon as Geraniums have done flowering they should be cut down, and the cuttings struck under a hand-light in the open border.

Flower Garden.—Beds intended for tender annuals, greenhouse plants, &c.. should be filled up as soon as possible. The last month was so favourable for this work, that little will remain to be done now. Uncover Tulips; they may be got up as soon as ripe; also Hyacinths. Ranunculus should be shaded. Propagate Pansies and Pinks. Stake and tie up Dahlias, Picottees, Carnations, &c.

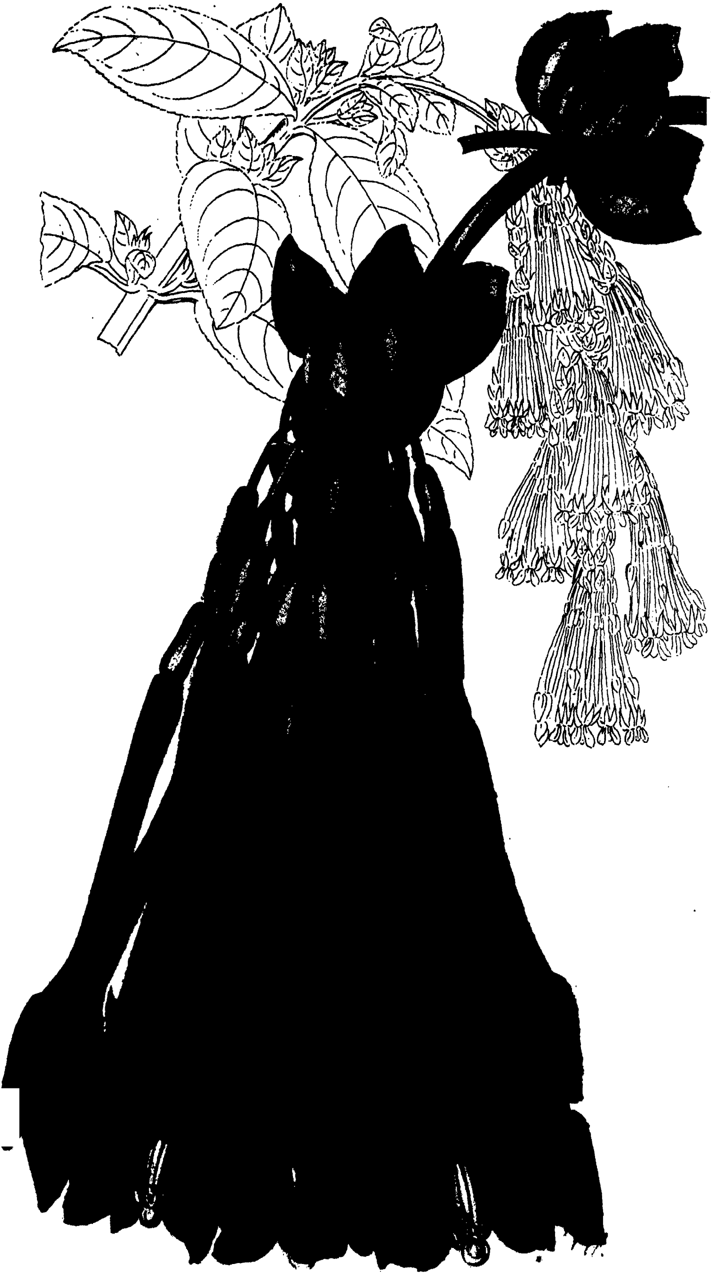
THE WEATHER FOR MAY.

The weather for May will not detain us long. Its leading character has been a continuation of that tranquillity of the atmosphere which has characterized the season since the termination, and, indeed, since the commencement of the severe frost. Of the three past months March was certainly the most tranquil, and almost unprecedented for the serenity of its sky, and the uniform character of its weather. April was a little more disturbed; but still there was no severe weather to check any of the common hardy plants, though more delicate ones required a little shelter from white frosts, which were, however, neither frequent nor severe. The consequence was, that tulips, and many other flowers, showed remarkably well, and were three weeks or a month earlier than in the average of seasons. The wind, and some rather bleak showers, tinged a few of the cups with green spots; but, in general, the bloom is as beautiful as the plants had been promising. We may say the same of all the early border flowers; nor is there any doubt that it will hold equally with the late ones, for such roots as were in the ground were hardened by the frost without being injured; and the store ones were not stimulated and weakened by that premature and frequently checked growth which shows itself when March and April are alternately shining and showery.

During May the weather has been still more irregular; but upon the whole it has been good growing weather, as is evinced by the leaves of the deciduous trees, which, though they have not come very early, have come in all their strength; and, as we can now dread little blighting weather, the foliage of the groves will be delightful, and, if the expression may be allowed, the whole face of nature will be as it were one flower. The course of the weather has, indeed, been very extraordinary, as much so as those continued and heavy rains by which it was preceded; and we know not when the change may come, though come it must. The Midsummer rains are the earliest time at which a great change may be expected; and, though this change may be a serious one for the farmer, it will not fall so heavy upon the florist, except in the blooming of autumnal flowers, and the ripening of seeds. In as far as the roses of autumn are concerned, this would be rather a serious matter, because the roses of autumn are certainly superior to those of June, in their appearance, their perfume, and the continuation of their flowering. They are also the roses which are best adapted for hybridization, and for all the higher departments of the culture of these finest of all flowers; and therefore the loss of the blooms, and especially the seeds of them, even for a single season, would fall heavy upon the floriculturist, especially the breeder of roses, whom it would throw back for a whole year.

Therefore we naturally look with some anxiety to St. Swithin, and hope that if any portion of his bones are yet remaining, the dean and chapter of Winchester will leave them alone, at least for the present season, in kindness to the growers of flowers.

It is true that the autumnal rains are not very constant to this dripping saint, but may come a month earlier, or a month later, from natural causes, in utter disregard for his censure. If, however, he has any control over the weather, we wish he would leave his aquatic propensities to a few gentle showers, until the flowers of autumn are safe; and, for the sake of the physical wants of mankind, until the crops are got in; and then, if it so please his saintship, he may have his six weeks without doing serious mischief to any one.



THE

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RELATIONS BETWEEN PLANTS AND FLOWERS AND THEIR NATIVE CLIMATES.

If there be any department of the delightful but extensive and varied subject of the culture of plants and flowers, upon which cultivators especially require instruction, it is the relations between them and their native climates; and if there be any department upon which the existing journals afford less information than they do upon others, this is the one. From Lindley to Harrison, we find accounts of plants, and of individual modes of culture, right or wrong, as the case may happen to turn out; but respecting the relations to which we allude, and which form the very essence of successful floriculture, when viewed in its proper extent, not one word is said. The cause of this silence upon the most important part of their avowed subject would be worthy of investigation, if one were in possession of the data; but as we neither possess this, nor have space to work out the investigation if we had, we must content ourselves by saying that the cause lies somewhere between ignorance of and incapacity for the subject, and want of feeling of its merits; and we must leave it to others to determine toward which extreme the truth approximates the more closely.

Our attention has been drawn to the subject from the fact, that, ever since we offered a few remarks on the simpler parts of it, not a single month has elapsed in which we have not received one communication or more lamenting the sickliness or failure of favourite plants, and asking what is to be done in order to keep them alive and restore them to vigour. One complains that his plants do not flower, but produce new shoots instead; and yet the plants themselves appear to be in the most vigorous health. Another complains that his plants, though by nature evergreens, untimely shed their leaves, and thus render unsightly the places which they are intended to adorn. A third complains that some general atrophy has fallen upon his plant, which has covered it over with a sickly hue of incurable disease, suspended its growth, and is fast blotting it out from the catalogue of living plants. In short, there is scarcely a disease, a suspension of growth, or a symptom of decay, of which we do not receive complaints. Those complaints, too, almost invariably refer to plants which are new to the cultivator; and which, in consequence of their newness, are costly. It may happen that in themselves, and when in their native climate, they are exceedingly hardy plants, and grow in waste and neglected places, flourishing there with great vigour, and blooming with great beauty.

Those who have complained to us of these mischances, and who feel them the most severely, are not professional florists. They select certain florist-flowers as the subjects of their culture, and that culture embracing few or many, according to the extent of the establishment; what they work upon is not simply nature, but certain properties which have been obtained by long artificial culture, as we find in the case of the tulip, the hyacinth, and even the common heartsease; for these, together with almost every other florist's flower, have been so changed by artificial means, that they do not seem the same plants as the very species out of which they have been bred when those species were in a state of nature. When these florist-flowers are highly cultivated, so as to produce those varieties which the professional florists most desire, and by which they make their profits, and then are allowed to fall into neglect, either because they have ceased to be fashionable, or for any other reason, they are not immediately attacked by those diseases and decays of which our correspondents complain; on the contrary, they, generally speaking, become much more hardy and vigorous than when they are cultivated with all the art of the florist; and before they begin to decay, they retreat back again to that natural state out of which they have been bred by the floral art;—as, for instance, the many and splendidly-coloured hyacinths, single or double, retreat back to the common blue bell hyacinth; the tulips lose their splendid colours; and the gorgeous heartseases of the garden become the humble pansy, which, in many places, overruns the fields. Those which we have noticed are striking instances, and instances of very common and very hardy plants. Though the elements of that beauty which art develops must be in them, in their simple or natural state, we are acquainted with no natural circumstance, or combination of natural circumstances, by which this beauty can be developed. It is all art, the production of the florist himself; and if he shall not succeed, he never thinks of going to nature, or natural circumstances, any more than a man who makes chronometers or steam-engines thinks of going to nature to learn the mechanical structure of his machines. A florist of this description goes to another florist who succeeds better than himself in preserving and improving the artificial beauties of the individual species, and endeavours to get the better of others in the market of the same. Such florists, of course, care little for the philosophy of floriculture, or for philosophy of any kind,—they are mechanics, and succeed or fail upon the same principles as other mechanics. But there is a higher order of florists, even trading florists, who must be intimately acquainted with the climatal adaptation of plants, both in respect of healthy growth and of fine flowering; or, which amounts to the same thing, they must employ men who are so acquainted. Professional growers of this description are usually styled Exotic Nurserymen; because they obtain most of their plants from foreign countries, either in the plants themselves, or in the seed. The leading men among them employ collectors to find the plants or seeds in the situations in which they grow naturally; and this is, of course, attended with a good deal of expense. Whether they obtain the plants themselves or the seeds, they do not generally have any artificial foundation to proceed upon; they find their plants in wild nature, and they have nothing but nature to guide them in the cultivation. If, as is generally the case, the collector is a man of talent and observation, he usually sends such an account of the locality of the plant as enables the party to whom it is sent to grow it with some success.

This is the way in which new additions, that is, additions of new genera and species, are made to our cultivated Flora; and as the very novelty of these plants gives them a value in the eyes of the fashionable, they fetch large prices; and the original possessor is a little chary of selling them to the trade, until the novelty and the demand which it occasions are over. After this the plant gets into more hands, the price is reduced; while it is just as beautiful and as valuable in itself as ever, it is brought within the reach of a much greater number of persons.

In consequence of this progress, amateurs of these classes, whether they keep gardeners, or cultivate plants for their own amusement, are enabled to obtain a constant succession of novelties; and if they have the proper feeling of the subject, this possession gives them a degree of pleasure, of which men of grosser or more vulgar minds can have no idea. It is here that the philosophy of floriculture becomes not only eminently valuable, but absolutely necessary. The seller of a plant, however new or curious that plant may be, cannot be expected to give a lecture on the mode of cultivating every plant which he sells; and though he had time and inclination, his customers would not, generally speaking, be disposed to listen to him. They purchase the plant, carry it home, and leave what they are to do with it for matter of future inquiry.

It is here that the kind of knowledge, some scraps of which we have endeavoured from time to time to lay before our readers, becomes so essentially necessary. Amateurs and gentlemen's gardeners are the parties to whom we specially address ourselves, though we may add that this knowledge is indispensable to every young gardener, who wishes to become worthy of the profession he has chosen.

An amateur, for instance, goes to a first-class nursery, sees a plant there which has the double advantage of being fine in its habit of growth and beautiful in its flowers, and of none of his rival amateurs—among which rivalship is usually a very kindly matter—having a plant of the same genus or species in his collection. He makes his purchase, returns home, places the plant where he expects it will show best, and all his family and friends come in their turn to admire the new and innocent beauty. All is well for a time; but ignorance of the natural circumstances of the plant has led to the placing of it in an unfavourable situation; it is ruined by excessive kindness, and in the end it dies, and in dying gets a bad name, as being a plant very ungrateful for the care bestowed upon it. Much in the same way, but far worse, it fares with the gentleman's gardener. The master brings home plants for the greenhouse, the dry-stove, the moist-stove, or the latter two alternately; and, generally speaking, he knows nothing of the plant but its name, if indeed he even remembers that correctly, still he presumes that the gardener must know all plants, and how to manage them, and thus if, which is very often the case, the plant refuses to flower, becomes unsightly, or dies, the innocent gardener offends his master, and may lose his situation. Now, with the exception of a very limited number, the nobility and gentry of this country do not pay wages which would cover the expense of preparing for the duties of the office; and the gardener who is expected to understand the management of every plant, how difficult soever it may be to acquire the knowledge of that management, would, in a pecuniary point of view, be far better cultivating a few acres in garden stuff, and selling the produce. This is the fatal dead weight which presses upon the culture of ornamental plants in Britain; and until it is removed, the art will not be what it ought to be. We believe it is not in accordance with the system in this country for gentlemen to give themselves much trouble about promoting even the professional knowledge of those who labour under them, and therefore we must look to some other quarter for that increased intelligence which is so desirable.

And where, it may naturally be asked, is this extension of knowledge to be sought for? To which we answer, not in learned societies; for they are the mere go-carts and leading-strings of the arts and sciences in their infant years; not in those who have become old as professional or as amateurs, for they have taken their places in society, and have neither the means nor the desire of getting out of the rut. If they have been fortunate, they enjoy the good things of the world; and if the reverse, their spirits are broken; and neither the one class nor the other can do much for the promoting of improvement. We must seek for that among the young,—among those whom the hopes of the world enable to ride buoyant over its despairs, and in whom the love of knowledge is still superior to the love of gain. These are the parties in whom our chief hope lies; but they labour under great difficulties. The information necessary for them is scattered through a multitude of books, most of them of a very costly description, so that no young floriculturist can possess the whole, and few indeed have access to them in public libraries. Even if they did so possess, or had such access, it would be of comparatively little value, in consequence of the time necessary for finding it out—time which no young cultivator could afford, even though there were no other bar in the way. This is the reason why we, different from all other conductors of floral periodicals, have endeavoured, from time to time, to give short and simple views of a few of the most important principles connected with the art; though only occasionally,—convinced that this department of our journal is not the least valuable. R. M.

ON STAPELIA.

BY MR. PLANT.

The genus *Stapelia*, and its allies, *Huernia*, *Piaranthus*, and *Caralluma*, being about this time in their greatest perfection; or, at least, in those collections in which the requisite attention and treatment is given them; I have thought it a good opportunity to say a few words in relation to their general treatment. Few plants have suffered more neglect within these last few years than the above-named; and yet few plants exhibit more singularity, or, as in some species, gorgeous colouring than does *Stapelia*—certainly they are not surpassed, even among orchidaceous plants, beautiful as these really are. But in this, as in almost every existing thing, taste is the ruling principle; and so to those only who may agree with me in admiring this class of plants is this little paper addressed.

The entire genus *Stapelia* are natives of the blowing, sandy plains of the Cape of Good Hope. With us their usual place is the greenhouse; or, it may be, (where the establishment contains it,) in a house appropriated to *Cacti*. Now this is unquestionably right, inasmuch as it is a near approach to the mean temperature of the Cape: but what I would suggest is, the propriety of giving them more seasonal treatment; that is, the keeping of the season of rest and the season of growth and flowering more distinct. This is a subject which, from the advantages I have derived from it, I am fully persuaded cannot be too firmly impressed on a gardener's mind. The mode I adopt is this—to begin with the resting season; this occurs soon after the plants flower the last time, which is usually in the month of August;

they are then, of course, in a sunny situation in the greenhouse. As soon as the last blooms are off, I immediately begin to reduce the quantity of water given. This should be done by degrees. From the end of October I give them none at all, till the commencement of the next growing season, keeping them, in the mean time, in a light, airy part of the house. About the end of February, or beginning of March, by which time the sun would be gaining too much power to render it safe to leave them longer without water, I repot such as require it into a mixture of very sandy loam, using a little peat, and give them a good drainage. A few pieces of potsherds mixed with the soil, so as to come between the roots, is a great assistance to them. The pots should be as small as convenient to hold the roots when potted. I give them a very gentle watering, to settle the earth, and then place them in a stove, vinery at work, or any other place in which I can secure a good steady heat. Those who have not the above convenience may attain the same end by placing them in a cucumber or melon frame, though, in that case, it is necessary to place a brick under each pot. But here it must be understood that *Stapelias* and cucumbers are not to be grown together; as, when placed in this heat, the *Stapelia* would require a far greater supply of air than would be compatible with the well-being of the cucumbers; yet a small frame filled with these, and a few *Cacti* for early flowering, would well repay the trouble occasioned. When placed in the desired heat, I water them gently for the first few weeks; then increase it by degrees to a good supply every day. By the beginning of May they will show flower. Continue the water and heat till the flowers expand; then remove them to the greenhouse. Here, too, they require plenty of water, and a place in which they can enjoy the sun all day, until the expiration of the growing season. With this treatment I have, at the present time (end of May), several plants blowing beautifully.

I may here remark, that there are a few species which require rather a larger quantity of loam in the composts. These may be easily known by their robust habits. Such are *S. grandiflora*, *S. ambigua*, *S. fissirostris*, *S. ramosa*, and *S. Massonii*. Others, again, which are smaller, require a lighter soil and a greater heat, or, rather, a longer continuation of it, to bloom them well. Of these I may mention, *S. acuminata*, *S. hircosa*, *S. hamata*, *S. asterias*, and *S. pulchra*. This last is the *Podanthes* of Haworth.

Also *Marginata*, (*Orbea*, Haworth,) and several others, vary a little in their time of flowering; so that the stove treatment may be safely continued till June; after which I remove the whole of them back to the greenhouse.

The treatment of *Huernia*, *Piaranthus*, and *Caralluma*, is exactly the same as that recommended for *Stapelia*.

R. P.

The Howe, Halsted.

VARIETIES OF FLOWERS.—HYBRIDIZATION.

This is one of the most curious and instructive of all subjects within the wide range of the speculations and performances of the florist; but it is one of which, in the present number, we can do little more than mention the name, and point out the parties by whom it should be far more intimately studied, and generally practised, than it has hitherto been. So prone are some species of plants to hybridize, that they do it naturally, and produce new and splendid varieties without any interference of human art; and, though the history has not been recorded, and is, therefore, very imperfectly known, there seems great reason to believe that very many beautiful flowers that appear in nature, and perhaps all double flowers that appear in this way, are naturally hybrids. As is the case among animals, it is only in the same species that natural and fertile hybrids make their appearance; and whatever may be said about the form, number, and arrangement of the parts, this is the true criterion of what is a natural species and what not. If this were properly attended to, we suspect that a very great number of those species which botanists, in their outrageous love of nomenclature, have established, are nothing more than varieties of one and the same species. Though hybridizing among animals is rare in comparison to what it is among vegetables, yet it appears to follow the same law in both. If it takes place between allied species, and not between varieties of the same, (and the more close the alliance the greater is the tendency to it,) then the hybrid is not exactly a perfect animal; it breeds back to the pure blood of either the one parent or the other, but it does not remain distinct, and perpetuate itself in its compound character. On the other hand, if the hybrid is between varieties of the same species, as, for example, between an European and a Negro, if the parents of a new generation are at the same distance from the original stock, the hybrid will continue itself, and perpetuate its character as a new variety, without any tendency to breed back to the one parent or the other. It is true that by new and repeated hybridizings we may altogether, or very nearly, obliterate the peculiar characters of one of the parents, and bring the race back to the other; but there is no increase in this, any more than there is a deficiency of it in the continued hybrid.

In plants, as we said, the principle is the same, though the practice is much less general, and the new characters are less striking. If the hybrid is between allied species only, and one of them predominates, the new sub-species will degenerate, or fall back to the characters of the predominating one; and if the characters of both are nearly equal, the new generations of the progeny will break apart, and perhaps there will be found, from the same seed vessel, seeds which will produce the one the one parent, and the other the other, in nearly the same purity as they were before the hybrid was obtained. If, on the other hand, the hybrid is between varieties of the same species, it would be much more permanent in its character either to the one or the other, unless the properties of one of them should greatly predominate. This predominating of the properties of one parent in the hybrid is a matter worthy of much observation and study, because it is the one upon which the florist must proceed in seeking to obtain flowers of any peculiar character. The energy of the fertilizing and the fertilizable principle is that by which we must be guided, because the resulting plant always takes after that parent which is most energetic. Unless there is this strong predomination in one of the parents, hybrids between varieties have little tendency to degenerate back to the type of either parent; but when they do degenerate, it is more towards the character of the wild flower in a state of nature. Thus, for instance, a bed of hyacinths may be of a great variety of colours—white, red, blue, and many intermediate tints; but if this bed is left for a time neglected, in soil favourable for the growth and preservation of hyacinths, all the blooms will, and that before very long, come to the single bells and the pale blue of the common wild hyacinth. In the case of a bed of roses, if they are neglected, they lose much of their beauty; but they retain their characters and their colours, with the single exception of becoming less and less double in the course of years, which shows that a red rose and a white one are either distinct natural varieties, or that roses are more stubborn to the artificial character impressed upon them than hyacinths: besides this, there is a wonderful fecundity and energy in many of the roses, and they form new varieties without any human art. These varieties almost invariably depend upon superior energy in the pollen, or vehicle of the fertilizing power; and so remarkable is this, that in some of the cultivated roses, hybrids, either artificial or accidental, often produce fertile seeds, when the pure plants of either variety are incapable of performing this operation.

Such are some of the principles upon which the florist must work in seeking new varieties by this process; and the cases in which these can be obtained are so numerous, and the process itself is so easy, that this is among the diversions of the florist: it is always a pleasing, and often a profitable diversion; for beauties of the first class may reward the experimentalist when he least thinks of it.

It is not, however, exactly the occupation for professional florists, who live by the sale of their plants, because the experimentalist may have to wait long, and after all be disappointed in the end. Amateurs, who cultivate flowers solely or chiefly for the pleasure of cultivating them, are the proper parties for carrying on operations of this kind, and therefore it is mainly to them that we would be understood as directing our attention. Except the very grossest of the ignorant and the sensual, most people are now florists to some extent or other, and they are becoming more and more so every day. Perhaps the first stimulus to this was the desire of looking at flowers as objects of simple beauty, but a man of any speculation cannot long remain satisfied with this; his next step is to study the nature and most successful mode of cultivating the individual plants, so that they shall be always healthy and vigorous, and appear in fine bloom when the season comes round. This is a much higher occupation than the former one, for it involves the study of many natural principles and laws; so that the man who cultivates plants with skill has already begun the career of the philosophy of nature,—the purest and the most mental of all merely human occupations.

The third step, and one which ranks higher in a philosophical point of view, and tends more to the general enlightenment of the mind, is the production of new varieties; which, as hybridization is the grand means of obtaining these, is, in fact, the philosophy of that process. Now, if every amateur would devote that time and talent to this subject which he spends in eyeing his flowers with delight, he would contribute something to the philosophy of floriculture; and the number of amateurs is so great that the sum of a very little done by each would amount to far more than can be accomplished by all the professional florists in the country. We have said that those professional florists cannot afford time for studying this matter thoroughly, or making the necessary experiments; and as they find subjects for the amateur, the least that he can do is to study and experiment upon those subjects for his own enjoyment and the general benefit of the art. To excite the amateur to doing this is the object of this short preliminary paper; and we will occasionally revert to the subject, and treat of it as applicable to different species of flowers.

ROCK-WORK, ROOT-WORK, ETC.

Since the study of botany and a love of flowering plants has become so prevalent in this country, neither pains nor expense have been spared to render botanical collections complete. Buildings for the culture and preservation of exotic plants are accompanied by suitable beds and borders for those which are indigenous or hardy enough to bear the rigours of our climate.

In introducing wild plants into our gardens, we always endeavour to give them the same kind of soil, and, as far as possible, similar situations to those which they appear to require in their native habitats.

In the vegetable kingdom we see there are aquatics, mountaineers, or alpines, epiphytes, parasites, besides the great majority of those which are found everywhere on the dry plains, or humid valleys of the country.

Accordingly, in the domestication of wild beauties, we provide rich beds or borders for those requiring good soil; beds of peat or moor earth for marsh or moor plants; basins or troughs of water for aquatics; conical heaps or ridges of stones for alpines; and mounds of roots or rugged parts of trunks thrown together on a bank of leaf mould, for the culture of such plants as affect that kind of decayed vegetable matter. When a complete collection of hardy plants is intended to be made, all such beds or stations are requisite. The heaps of stones and logs not being beautiful objects in themselves, are always, or should be always, kept subordinate, and not be too conspicuous among the more beautiful and dressy parts of the garden. Any recess or corner, which may be visited at pleasure, is usually chosen for such features, rather than obtruding them on the visitor's notice.

And yet *rockeries* have been made principal features in flower gardens; sometimes by accident, that is, when rocks happened to abound on the spot; but more frequently by design, and formed at a great expense. But after all, such a principal feature in a flower-garden can hardly be called good taste. When splendid architecture and magnificent exotics are seen at the same instant with a brow of rude mountain scenery, covered with the wildest native plants, it is assuredly a most incongruous association. The contrast is too extreme; for though both yield pleasurable ideas separately, they cannot be united with propriety. If a rocky dell can be added as an appendage to a flower-garden, it is a happy adjunct, especially if the path to the principal part leads through it; but there should be a strong line of separation.

Rock-work, wherever intended to be formed, should always be constructed with *one kind* of stone; not, as usually seen, made up of petrifactions of building bricks from kilns,—scoria from forges, —flints from lime-works, &c. altogether a bad rubbish-like assemblage, and as a work of art quite contemptible. But when stone is used and laid in horizontal strata, as it probably lay in its native bed, it has an artistical look, and the interstices answer well for reception of the plants.

Root-work is built on a mound of earth like rock-work, and laid together as irregularly as possible. The plants, whether roots or seeds, are inserted in the openings, or in any clefts or cavities of the blocks. The British orchidaceæ generally do well in such situations; and as the genera and species are pretty numerous, they form an interesting association. The wood-sorrel, wood-anemone, wood-ruffe, &c. are particularly well suited for root-work; and many other plants, both annual and perennial, may be made to embellish and thrive on the decaying blocks; among which the British ferns should always have a place.

Both root-work and rock-work, when well furnished with a good selection of the more beautiful woodland and alpine plants, are particularly interesting to the botanist; and though, as already said, they are rather rude features for the place, their utility justifies their admission; for besides the well-prepared soil in which they, the plants, grow, it is an advantage to see them accompanied as they are seen in nature.

A pool or basin of pure water for aquatic plants is always a pleasing and useful appendage in a flower-garden. The plants should be placed in pots, and sunk more or less under the surface of the water, according to their natural habits. Feeding and waste pipes are usually adapted to such basins, for the sake of renewing the water occasionally; and they form a convenient receptacle for a few gold and silver fish. These basins are usually formed by brick-work, if the natural soil be not sufficiently retentive of water, and the sides have a curb of hewn stone as a finish. Sometimes a *jet d'eau* occupies the centre, which is a pleasing ornament when there is a command of water.

Rustic ornaments are admitted into flower-gardens as fanciful stations for plants. A deformed stump of a tree, hollowed out at top to receive a little earth, is planted with verbenas or other dwarf creeping or trailing plants. Other rough forms, as vases, cenotaphs, baskets, &c. are introduced to give variety; and there is now a great choice of potter's ware ornaments, suitable for gardens, which are at once both elegant and cheap.

Such objects in a garden show that the owner has some share of taste, which if it be exercised with propriety enhances the beauty of a well-kept garden; and though the taste for sculptured ornaments in flower-gardens, once so fashionable in Italy and France, is now almost extinct, there are signs of a return to the old mode of enriching garden scenery, as several new ones in this style, on rather a large scale, are now in course of completion in this country.

If such gardens be arranged with good taste, avoiding all extravagance of design and irrationality of execution, very interesting scenery may be created by the combination of architecture and sculpture with vegetation and flowers in artistical order. The plants should be the rarest and most beautiful of their kinds, and the artificial embellishments should be chastely classical in form, and characteristically interesting.

ON THE ACTION OF CHARCOAL ON VEGETATION.

BY EDWARD LUCAS.*

In a division of a low hothouse in the botanical garden at Munich, a bed was set apart for young tropical plants, but instead of being filled with tan, as is usually the case, it was filled with the powder of charcoal, (a material which could be easily procured,) the large pieces of charcoal having been previously separated by means of a sieve. The heat was conducted by means of a tube of white iron into a hollow space in this bed, and distributed a gentle warmth, sufficient to have caused tan to enter into a state of fermentation. The plants placed in this bed of charcoal quickly vegetated, and acquired a healthy appearance. Now, as always is the case in such beds, the roots of many of the plants penetrated through the holes in the bottom of the pots, and spread themselves out; but these plants evidently surpassed in vigour and general luxuriance plants grown in the common way,—for example, in tan.

Several of them, of which I shall only specify the beautiful *Thunbergia alata*, and the genus *Pereskia*, throve quite astonishingly; the blossoms of the former were so rich that all who saw it affirmed they had never before seen such a specimen. It produced also a number of seeds without any artificial aid, while in most cases it is necessary to apply the pollen by the hand. The *Pereskia* grew so vigorously, that the *P. aculeata* produced shoots several ells in length, and the *P. grandifolia* acquired leaves of a foot in length. These facts, as well as the quick germination of the seeds which had been scattered spontaneously, and the abundant appearance of young Filices, naturally attracted my attention, and I was gradually led to a series of experiments, the results of which may not be uninteresting: for, besides being of practical use in the cultivation of most plants, they demonstrate also several facts of importance to physiology.

The first experiment which naturally suggested itself was, to mix a certain proportion of charcoal with the earth in which different plants grew, and to increase its quantity according as the advantage of the method was perceived. An addition of two-thirds of charcoal, for example, to vegetable mould, appeared to answer excellently for the *Gesnera* and *Gloxinia*, and also for the tropical *Aroideæ* with tuberous roots. The first two soon excited the attention of connoisseurs, by the great beauty of all their parts and their general appearance. They surpassed very quickly those cultivated in the common way, both in the thickness of their stems and dark colour of their leaves; their blossoms were beautiful, and their vegetation lasted much longer than usual; so much so, that in the middle of November, when other plants of the same kind were dead, these were quite fresh and partly in bloom. *Aroideæ* took root very rapidly, and their leaves surpassed much in size the leaves of those not so treated. The species which are reared as ornamental trees on account of the beautiful colouring of their leaves—I mean such as the *Caladium bicolor*, *Pictetia*, *Pœcile*, &c.—were particularly remarked for the liveliness of their tints; and it happened here also, that the period of their vegetation was unusually long.

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* A communication read by Mr. James Allen Ransome, at the Royal Victoria Gallery, Manchester.

A *cactus*, planted in a mixture of charcoal and earth, throve progressively, and attained double its size in the space of a few weeks. The use of the charcoal was very advantageous with several of the *Bromeliaceæ* and *Silenaceæ*, with the *Citrus* and *Begonia* also, and even with the *Palmæ*. The same advantage was found in the case of almost all those plants for which sand is used in order to keep the earth porous; when charcoal was mixed with the soil instead of sand the vegetation was always rendered stronger and more vigorous.

At the same time that these experiments were performed with mixtures of charcoal with different soils, the charcoal was also used free from any addition, and in this case the best results were obtained. Cuts of plants from different genera took root in it well and quickly. I mention only the *Euphorbia fastnosa* and *fulgens*, which took root in ten days; *Pandanus utilis*, in three weeks; *P. amaryllifolius*, *Chamædorea elatior*, in four weeks; *Piper nigrum*, *Begonia*, *Ficus*, *Cacropia*, *Chicocca*, *Buddleja*, *Hatrea*, *Phyllanthus*, *Capparis*, *Laurus*, *Stifftia*, *Jacquinia*, *Mimosa*, *Cactus*, in from eight to ten days; and several others, amounting to forty species, including *Ilex*, and many others. Leaves and pieces of leaves, and even *dedimenti* or *petioles*, took root and in part budded in pure charcoal. Amongst others we may mention the *fioliola* of several of the *Cycadaceæ* as having taken root, as also did parts of the leaves of the *Begonia Selsairice*, and *Tacaranda Brasiliences;*

coal undergoes decomposition; for after being used five to six years it becomes a coaly earth, and if this is the case, it must yield carbon, or carbonic oxide, abundantly to the plants growing in it, and thus afford the principal substance necessary for the nutrition of vegetables. In what other manner, indeed, could we explain the deep green colour and great luxuriance of the leaves and every part of the plants, which can be obtained in no other kind of soil, according to the opinion of men well qualified to judge? It exercises, likewise, a favourable influence, by decomposing and absorbing the matters excreted by the roots, so as to keep the soil free from the putrifying substances which are often the cause of the death of the spongiolæ. Its porosity, as well as the power which it possesses of absorbing water with rapidity, and after the saturation of allowing all other water to sink through it, are causes also of its favourable effects. These experiments show what a close affinity the component parts of charcoal have to all plants, for every experiment was crowned with success, although plants belonging to a great many different families were subjected to trial.

FUCHSIA CORYMBIFLORA.

BY MR. J. STANDISH, NURSERYMAN OF BAGSHOT.

(WITH AN ENGRAVING.)

This noble plant was raised by myself from seeds received from Cusco, in Peru. In the "Flora Peruviana," the species is spoken of as acquiring the height of a man, with a stem little inclined to branch. It was found by Ruiz and Pavon, in the woods of Chinchao and Muna, to the north-east of Lima, in shady situations. It is in this part of the world that the tribe of Fuchsias attain their greatest beauty, and develop those colours and forms which have gained for it among the Peruvians the name of Beauty Bush. Besides the subject of the present notice, several others of even finer appearance are mentioned by the authors of the Flora Peruviana, and are among the greatest desiderata of horticulture. *F. serratifolia* is a bush, with pink flowers an inch and a half long, growing in the manner of *F. macrostemma*, and its varieties. *F. denticulata* is described as twelve feet high, gorgeously beautiful, when loaded with its purple flowers, still larger than those of *F. corymbiflora*, while *F. simplicaulis* and *apetala* are similar in appearance, but yet more striking.

I consider *F. corymbiflora* as hardy as any Fuchsia in cultivation. It grows and flowers freely, if planted out in light rich soil about the end of May, where it soon forms a fine head and abundance of roots. When it is in this state, it may be taken up and planted in a conservatory, or a pot, without the slightest injury. The plant is a very strong feeder, and can scarcely have too rich soil, or too much room to grow in. Small flowering plants may be obtained by taking off cuttings when in a flowering state; and by planting them in thumb pots placed under a bell-glass, they will strike root immediately; and by shifting them in larger pots like Balsams, they will soon become fine flowering plants. *F. corymbiflora* will in a few years become a plant at least twice the height spoken of in the Flora Peruviana; and as to flowering, it appears to flower at every branch it makes. From recent observation, the flowers do not come so large in the height of summer as in the autumn and spring; the flowers flagging when fully exposed to the hot sun.

J. S.

June 12.

NOTE BY THE EDITOR.—The Fuchsiæ form the second tribe of the *Onagrurieæ*, and consist of two sections—one with the stamens enclosed and the flowers polygamous, and another with the stamens exserted and the flowers bisexual. They all belong to the Linnæan class and order *Octandria Monogynia;* and they derive their common name from Fuchs (Fox), an eminent German botanist. They are among the most graceful of hardy, or half-hardy, flowering shrubs; and, with the exception of two or three species, they thrive well in the open air, especially on rock-work; but they all require a rich, and, at the same time, a free soil. *F. coccinia*, the scarlet-flowering one, was introduced into this country from Chili as long ago as 1788, and was long esteemed as a first-rate favourite, though some recent ones are more free in their growth, and more splendid in their flowering.

With a few exceptions they are natives of Central and South America, from the table-land of Mexico all the way to Cape Horn. They occupy the place of the heaths in that part of the world, the same as the *Epacrideæ* do in Australia; but the soil which they require is different from that which suits best with the last-named genus and with the heaths. Some grow in exposed situations, and others in the shade; and the soil best fitted to them seems to be decomposed volcanic rocks and leaf-mould, with an admixture of sand; but, as they are strong growers, there must not be too much of the latter. Out of South America the only species that have been discovered are *F. discolor*, a red and purple one, found in the Falkland Islands, and *F. excorticata*, with variable coloured flowers, but generally green or red, which occurs in New Zealand. These two appear, from their variable colours, to have been transported from their native habitat in South America, which must be regarded as the head-quarters of the whole tribe. In this country, as has already been said, they grow freely; and as their native habitats are on the mountains, where showers are frequent, they do not require any particular seasonal treatment, excepting the shelter of a frame in very severe weather; and a few of the more delicate ones suit well for the greenhouse.

THE FLORIST'S LETTER-BOX.

This month we must confine our replies to the fewest words possible. M. had better consult any maker of flower-pots, for the sizes answering to the numbers, bearing in mind that there is a difference of diameter between the shallow ones and the deep.

E. M. will please to observe that *Lechenaultia* is a New Holland plant, and therefore seasonal in its habits; and as the soil in which it naturally grows consists of decomposed rock, with less vegetable mould than the soil of most countries, a very considerable mixture of sand is required in order to grow it successfully in this country. Both species are greenhouse shrubs, or, at least, cannot stand our winters without shelter; though, like most New Holland shrubs, they ought to be hardened by free exposure during the latter end of summer and the beginning of spring. Dry peat, if properly macerated in water, is not inferior to that fresh from the bog, as it is not growing moss, but decayed moss that suits for plants. Cut flowers, if fine enough to be worth the trouble, may be packed in tin cases, perforated with holes at the top, and packed in a box of damp moss; but all such things must be sent to us carriage free. We are glad that this correspondent has profited by our remarks on *Crassulæ*. When we do offer advice, our readers may depend upon its being derived from the very best sources.

M. W. K.—The subject of Vines does not properly fall within our province; but we may remark, that no vine will thrive in so poor a compost as he mentions. The proper localities of vines are volcanic districts, where rich mould, with a portion of sand, is collected in the chinks and fissures of the rocks. His vines will never do good; and therefore he had better root them out, prepare a richer soil, and plant fresh ones. Many people spoil both the growth and the flowering of their vines by planting them too deep.

THE WEATHER FOR JUNE.

In the latter part of May, and the early part of this month, the weather was what may be termed hard, with cold winds from the north-east, and a little frost during some nights. This hard weather alternated with weather of a softer character—south-west winds, and a considerable degree of warmth. By these means vegetation was alternately checked and stimulated; the fruit fell in vast quantities; insects were hatched, to feed upon the juices, rendered saccharine by the stagnations; and, though the effect was most destructive on trees, herbaceous vegetation suffered, where very much exposed. The same kind of weather continued through great part of June; but it was occasionally broken by local thunder storms, and heavy showers of rain or of hail, which was very destructive in some districts of the south. The chalk downs are the places in which such local storms are peculiarly produced; because the difference between their diurnal and nocturnal temperature is much greater than that of soils of more porous consistency and stronger conductiveness of heat. During the day, the mere surface of the down, and the air immediately over it, are very much heated; but the heat does not extend its influence to any distance downward; and thus both surface and air become cold very soon after sunset. Their warmth during the day draws from the surrounding districts an air very much disposed to absorb vapour; and when the cold of night comes, the air blows outwards, loses its evaporative power, and the local storms alluded to are the results.

Toward the latter part of June the weather was, generally speaking, softer, and there was some more rain, though the quantity was by no means great, and there could not be said to be any general change of the weather.

CALENDAR FOR JULY.

STOVE.—At this season of the year it is particularly necessary to preserve a humid atmosphere, as this alone will keep the plants here in a vigorous state. The red spider is frequently a great pest in stoves; and it is only by the free application of water that they can be decreased or destroyed. Should any of the plants be infected with white or brown scale, immerse the head in water for about four-and-twenty hours. Seeds of Nymphæa, and other aquatics, should be sown as soon as ripe. The fruit of Passiflora Edulis is by many esteemed for the desert. To have it fine-flavoured, the fruit should be thinned moderately, and frequently syringed, till changing colour. A good supply of air may be given on fine days. Propagation had better be deferred till next month.

GREENHOUSE.—Geraniums should now be cut back to three or four eyes, and the cuttings struck. Camellias should be attended to as the buds appear. Keep them only moderately moist and shaded. Also Calceolarias, unless such plants as are seedlings: these should have as much sun as possible. Air may be left all night. Give plenty of water to those plants retained in the house; and those placed out should be securely fastened with stakes. Oranges, Lemons, Camellias, &c. may now be budded. The hardier sorts of Cacti may be placed in a sunny situation out of doors.

FLOWER GARDEN.—Take up Tulips, Hyacinths, Narcissus, and other bulbs, done flowering; dry them in a shaded place. Roses budded this month generally succeed better than at any other time. Pipe Pinks, Carnations, and Picottees, or lay them, if preferred. They require constant attention to properly open the flowers. Keep Dahlias constantly tied up. Thin the strong growing kinds. Look after earwigs. Ranunculus should have all the weather. The foliage must be watched closely. As it begins to decay at bottom, take the roots up; dry them also in the shade. Tender and half-hardy annuals in the borders should have water every dry day.

FLORICULTURAL INTELLIGENCE.

THE HORTICULTURAL SOCIETY OF LONDON held their Second Show for the season on Saturday, June 12th. Though the sky was a good deal overcast, it was, perhaps, better adapted for the display of flowers, both animate and inanimate, than if the sun had shone fully out in a clear sky. Though there are prizes appointed for distribution at these displays, the grand contest is between the flowers and the ladies,—the amateurs appear to consider the latter as having taken general admiration by storm on the occasion alluded to. The attendance was full, even to crowding, and the strictest order was kept; so that, notwithstanding an almost unprecedented assemblage of equipages, no accident happened. One excellent regulation of these meetings is, the care taken to exclude improper characters; in consequence of which the visitors can range at their pleasure, without the least apprehension from pickpockets. Many persons of title were present; but it is not our vocation, as simple florists, to treat of the species and varieties, or the mode of cultivating these, so as that they may become the gems of society, as favourite flowers become the gems of the vegetable kingdom.

The field-days of this Society are splendid galas, when the weather is fine; and something is due to the managers and proprietors for finding out so innocent a recreation. With this, however, the Society stops; and even this the public pay for. We do not object to the bands of music, and other attractions not floral, to which recourse is had on these occasions; and, further, we like much better to see the prizes awarded to cultivators in other places, than if they were bestowed upon those in the gardens, even for the best-merited superiority. We do wish, however, that Horticulture, and, more especially, Floriculture, were brought a little more forward as the grand attraction, because this would add the benefit of example in producing, to the mere fact of finding a place and admirers for the productions of others. One Society cannot, however, accomplish every thing; and, as this Society must attend to the "main chance," as the means of its very existence, they probably find their interest more promoted by this garnish than it would be by a more exclusive attention to floricultural proceedings and productions.

The following are a few of the more interesting plants that were exhibited:—

Cattleya Acklandia, most beautiful.
  Mosseæ, several varieties.
Dendrobium fimbriatum, splendid.
  cærulescens, fine.
Brassia maculata.
Schomburgia tibicinus, for the first time.
Stanhopea quadricornis.
  saccata.
Odontoglossum cordatum.
Cyrtochilum stellatum.
Epidendrum aciculare.
  crispatum.
  aloefolium.
Ærides odorata.
  affine.
Saccolabium guttatum, two fine plants.
Vanda teres.
Maxillaria cristata.
Epidendrum primulinum.
Peristeria pendula.
Gongora atropurpurea.
Epacris grandiflora, fine plant.
Lechenault formosa.
  biloba.
Pimelia decussata.
Baronia serrulata.
  pinnata.
  denticulata, all very fine.
Erica splendens.
  ventricosa carnea.
    hirsuta.
    coccinea.
  muscaria.
  vestita coccinea.
    alba.
Stephanotes floribunda.
Pelargoniums, very fine, in collections.
Jæona coccinea, very fine plants.
Cytisus racemosus, several varieties.

The show of Roses was most beautiful, as well as those of Pinks and Heartsease; but to mention the whole would occupy several pages.

We subjoin a list of the successful competitors for the medals, and feel much pleasure in perceiving that the majority of them were among the most eminent growers.

Cape Heaths, 20 species...Gold Knightian, Mr. W. Barnes, gardener to Mr. Norman; Large Silver, Mr. Butcher; N. Silver Knightian, Mr. Jackson.

Cape Heaths, 6 species...Gold Banksian, Mr. R. May, gardener to Mr. Goodhart, Langley Park; Large Silver, Mr. Bruce, gardener to Mr. Miller; Silver Knightian, Mr. Barnes.

Tall Cacti...Silver Knightian, Mr. Wright; Silver Banksian, Mr. Falconer.

Green Stove-house Plants, from 50 to 60...Gold Knightian, Mr. Green, gardener to Sir E. Antrobus, and Mr. Butcher, gardener to Mrs. Lawrence; Gold Banksian, Mr. Hunt, gardener to Miss Traill.

From 15 to 20...Gold Banksian, Mr. W. Barnes; Large Silver, Mr. Jackson and Mr. Young.

Miscellaneous Flowers, not Florist's...Silver Knightian, Mr. Mylam; Silver Banksian, Mr. Green and Mr. Rivers.

Roses...Gold Banksian, Mr. Milne, gardener to Mr. Chauncey; N. Gold Banksian, Messrs. Wood and Son, and Mr. Rivers.

Herbaceous Calceolarias...Large Silver, Mr. Green; Knightian, Mr. Watson, gardener to Mr. Wells; N. Large Silver, Mr. Catleugh; N. Knightian, Mr. Gaines.

Shrubby Calceolarias ... Large Silver, Mr. Green; Knightian, Mr. Watson; Banksian, Mr. Barnes; N. Silver, Mr. Gaines; N. Silver Knightian, Mr. Catleugh.

Miscellaneous Florist's Flowers ... Large Silver, Mr. Green; Knightian, Mr. Foster; Banksian, Mr. Mitchell, Mr. Watson, Mr. Bridges, Mr. Norman, and Mr. Catleugh.

Pinks...Silver Knightian, Mr. C. Knight; Banksian, Mr. Bridges; N. Silver Knightian, Mr. Norman; N. Banksian, Mr. Wilmer.

Pelargoniums, large collections ... Gold Banksian, Mr. Cock; Silver Knightian, Mr. Butcher; N. Gold Banksian, Mr. Catleugh; N. Large Silver, Mr. Gaines.

Small collections...Large Silver, Mr. Cock; N. Large Silver, Mr. Catleugh.

Collections of six species of Exotic Orchidaceæ...Gold Knightian, Mr. Mylam, gardener to Mr. Kneller; Large Silver, Mr. Inslesy, gardener to Mr. Barker; Silver Knightian, Mr. Barnes; N. Gold Knightian, Messrs. Rollisons.

Three species...Gold Banksian, Mr. Mylam; Large Silver, Mr. Butcher.

Single Specimens...Large Silver, Mr. Craggs and Mr. Mylam; Knightian, Mr. Jarratt; Banksian, Mr. Bruce.

Ornamental Plants...Large Silver, Mr. Falconer; Knightian, Mr. Dicks; Banksian, Mr. Bruce and Mr. Mountjoy.

Single Specimens ... Large Silver, Mr. Wing; Silver Knightian, Mr. Vetch; Silver Banksian, Mr. Young.

THE MANCHESTER BOTANICAL AND HORTICULTURAL SOCIETY held their first meeting for the season on Tuesday, the 25th of May, 1841, in the Town Hall, Manchester.

Tulips...The show of these was pretty good for this period of the season.

Anemonies...Few shown, but these good.

Pansies...A most excellent show. One pan of 24 very fine ones shown by Thomas Davenport, a colour mixer from Stand, obtained as a prize a silver medallion, presented by Mr. T. D. Watkinson, seedsman. There were some fine pans of Mr. Watkinson's own showing also, and some splendid varieties from Mr. John Henchman, of Edmonton.

There were several fine baskets of flowers, the spoils of large gardens; some remarkably fine orchideous plants from the gardens of Mr. Brocklehurst, of Macclesfield, Rev. John Clowes, and other gentlemen; amongst them was a very splendid Saccolabium guttatum, with two long branches of flowers; a Coryanthus speciosus; a Vanda teres; Bletia Tankervilli; Cirrhea viridipurpurea; as well as other less known plants; Oncidia, Maxillaria Vitellinum, and M. Deppei, Epidendron fragrans, Brassia maculata, &c.

Of the flowering and ornamental shrubs, there was great variety, including Pelargoniums, Calceolarias, Cinerarias, Ericas, and some gorgeous Cacti. Amongst the fragrant charms of this table, were some beautiful Yellow Noisette Roses. A fine blooming Hydrangia hortensis was much admired.

The fruits and vegetables were the best ever seen here at this season, especially the Pines, Grapes, Strawberries, and some immense Rhubarb, eight stalks weighing 35½ lbs., and 41 inches long in stem. Amongst the fruit, Apples and Pears of last year's growth in fine preservation.

The promenade was enlivened by two military bands. The public were admitted at 2*s.* 6*d.*, and at four o'clock at 1*s.* each.

The next Show is fixed for 30th June, at the Gardens, Old Trafford.

A list of the prizes not having appeared, I cannot supply you so fully as I intended.

R. F.

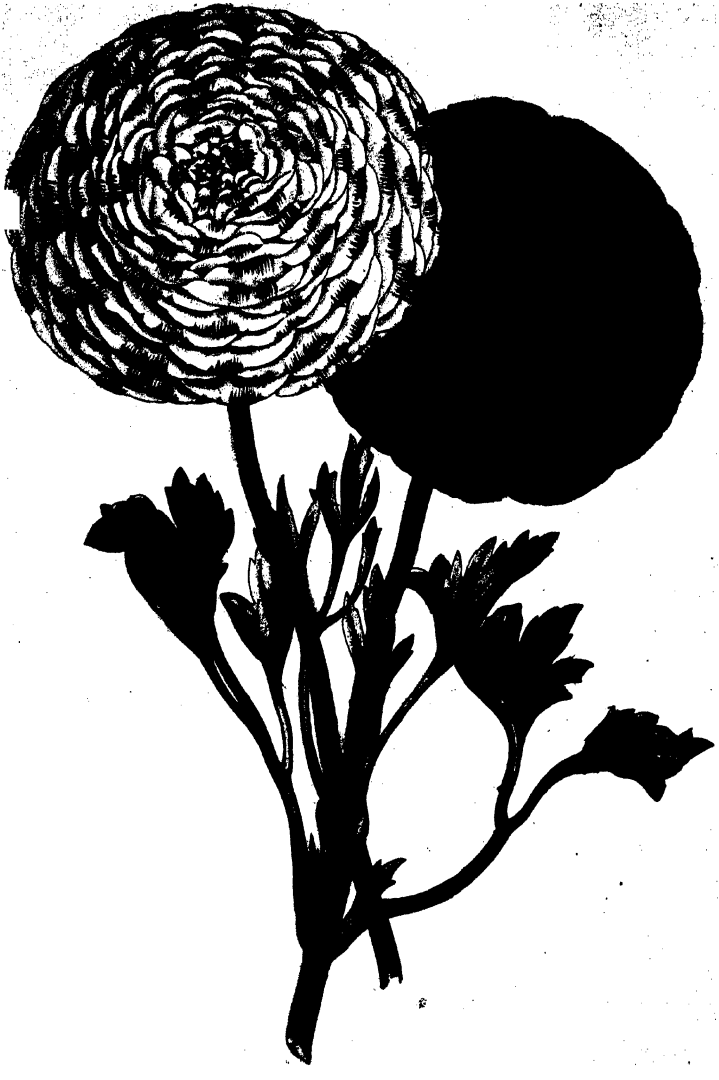
CUT FLOWERS.

Best 12 Ranunculuses (not less than 6 varieties)...Mr. J. G. Shepherd.
Second Ditto...Mr. Wheeler.
Third Ditto...Mrs. Oldman.
Best 12 Pinks (not less than 6 varieties)...Mrs. Simpson.
Best 12 Roses (not less than 6 varieties)...Mr. J. G. Shepherd.
Second ditto...Hon. Mrs. Lushington.
Third ditto...Wm. Hall, Esq.
Best collection of Hardy Out-Flowers, not less than 6 varieties...Mrs. Chambers.
Best 12 Pansies...Hon. Mrs. Lushington.
Second ditto...Ditto.
Best Bouquet of Miscellaneous Flowers...Mrs. Simpson.
Best Floral Device...Mrs. G. P. Marsh.
Best collection of Annuals, not less than 6...Mrs. Hyde.
Best 6 Stocks, whole Plants, varieties...Mrs. Simpson.
Best 3 Stocks, ditto, ditto...Ditto.
Best 6 Irises (bulbous)...Mr. J. G. Shepherd.
Second Ditto (ditto)...G. L. Gosselin, Esq.
Best 6 ditto (tuberous)...Wm. Hall, Esq.
Best collection of Indigenous Plants in bloom, with names, gathered within 20 miles of Faversham...Lady Harris.

EXTRA PRIZES.

Best Stove Plants...Lady Sondes.
Best 2 Cactus, in bloom...Mr. J. G. Shepherd.

Fruit, Vegetable, and Cottagers' Prizes, numerous.



. TYSO'S PAULINE.   2. TYSO'S SELECTUS.

THE

FLORIST'S JOURNAL.

AUGUST 1, 1841.

ON THE PROPAGATION AND CULTURE OF RANUNCULI.

BY MR. JOSEPH TYSO, WALLINGFORD, BERKS.

(WITH PORTRAITS.)

THE specimens figured are *Pauline*, white, edged with lilac; and *Delectus*,—named *Selectus*, by a blunder of the engraver,—yellow, edged with orange-red.

The *Ranunculeæ* are among the most generally distributed, and in a state of nature, the most admired of common and hardy flowers. Who, in infant life, has not eagerly gathered those buttercups, which are spread as an embroidery of gold over the emerald green of our summer meadows, and the glossy hue of which has, perhaps, not a rival among our wild flowers? In the natural system, they belong to the first order of plants, which contains also the clematis, the anemone, and several other tribes. There is a family likeness in the whole order; and they have this also in common, that there is something acrid about them, which protects them from grazing animals and from many insects. In the Linnæan system they either belong to *Polyandria* or *Pentandria;* and the tribe of which we now speak are polygyneous. Though named from *Rana*, a frog, they are not all found in moist situations; for even in Britain they inhabit from the marshy pool to a considerable height in the dry mountain.

The garden species, of which there are so many, and such beautiful varieties, is a native of the Levant, but has been cultivated in Britain for about two hundred and fifty years. As the whole species are hardy plants, and most of them have perennial roots, there is no difficulty in their culture, which is faithfully described in the following part of this paper by one of the most skilful and successful growers.—ED.

Having been an admirer and cultivator of this beautiful tribe of flowers for about thirty-five years, and a raiser of seedlings for fourteen years, I beg to state, for the information of your numerous readers, the results of my observation and experience.

METHOD OF RAISING SEEDLINGS.—Procure some good seed; sow it in spring or autumn, about February or October, in boxes or pots filled to the brim with fine light loamy mould. Press the surface level with a board; sow the seeds thickly, and water with a small rose-pot, to make them lie flat. Sprinkle with fine dry mould just sufficient to cover the seed; water again, and place the boxes in the shade. The seed will come up in a month. Protect from heavy rains and slugs; keep the surface moist by frequent waterings from a finely-pierced rose-pot. Take the roots up in July, when the grass is withered; preserve them in bags or boxes in dry sand. Plant them in the succeeding February six inches apart every way; for though the seedling roots be small the first year, yet they require more room than the old varieties. In June they will bloom profusely; select and mark the best by tallies, and preserve each root separate in order to test their qualities; then treat them as you do the old sorts. Or to save a year (which is an important portion of a man's life,) procure some good seedlings; these will flower the next season, producing semi-double, and some few double flowers. Some of the *best* seedlings will send up a pericarp, but they seldom produce anthers. This circumstance suggests the propriety of impregnation; therefore, when the plants are in bloom, take a large camel's-hair pencil brush, and apply it to the anthers of the semi-doubles, to collect the pollen or farina from them; then apply it to the pericarps of those that have good properties which are nearly double. This operation will fertilize the seed vessels, so that they will produce seed of a superior kind. By this method we have raised many thousands of seedlings, from which we have selected more than one hundred and fifty new varieties of the first quality. Most of them are distributed throughout the kingdom; and among many other testimonies to their superiority, I will select one from Dr. Horner, of Hull, who says, in a letter, dated September 12, 1840:—"I have no hesitation in pronouncing your seedlings to be infinitely superior to any thing I have seen, new or old; and not the least of their valuable properties is, their *certainty* of a full and vigorous bloom."

SOIL.—Much has been written on this subject; but I have proved, by long experience, that a sandy, hazelly loam, collected with the turf from a field or common, mixed with about one-third of *old* manure, is most congenial to them. This compost should lie exposed six or eight months, and be turned at least twice in that time, that the whole mass may be perfectly incorporated. Ranunculi delight in a rich soil, but they will not thrive where there is *fresh* manure.

MANAGEMENT.—Prepare your beds in autumn. If your natural soil be uncongenial, remove it from the bed to the depth of a foot, and fill up with the above prepared maiden soil. To keep the roots cool and moist, let them not be raised more than one inch above the surface of the paths. Plant the third week in February, without disturbing the soil more than is necessary. Water frequently in dry weather; when the flowers are about half blown, give shade from scorching suns, by white calico, or netting; and from heavy rains, by a covering of mats; remove them at nights, except just before show day. When the blooms are past perfection, let the beds be entirely uncovered. Tie up the flower stems from which you intend to save seed, to small sticks. When the seed pods turn brown, they should be gathered, and preserved entire until the time of sowing. Scrape off the seed with a pen-knife, and be careful to separate every seed. The adoption of the above method of culture will ensure success, and yield pleasures that will amply repay the labours of the florist.

J. T.

June 26th, 1841.

PRINCIPLES OF FLORICULTURE. N°. I.

HYBRIDIZATION is one of the nicest and most useful operations in the practice of floriculture; and the principles upon which it depends are far from being the least instructive. We may here remark, and press our remark strongly upon the attention of the young gardener, that there is something higher in his occupation than in any of the merely mechanical trades and professions, how highly soever they who follow these may be esteemed and rewarded. In most trades there is a period of pupilage; and when that is passed, it is not understood that the party requires any future study. But a florist, or indeed a cultivator of any department of the vegetable world, must be a student for life; and such is the nature of his profession,—more especially if he is a florist, and seeks to obtain what is new and beautiful,—that his own experience forms the grand and important book, out of which he has to learn those general principles which guide him in his operations. Consequently the longer that he practises and studies, the greater must be the resulting knowledge, both to himself and others. There is no doubt that in various species of plants, hybrids were occasionally formed before the admirers of flowers either understood the principle or performed the operation; nor was it till the fertilizing and fertilizable parts were distinctly known, and their functions understood, that this part of the art was turned to advantage. Those who are ignorant of the principles of Botany, which, we regret to say, is too often the case with amateurs, and sometimes with professional men, are still ignorant on this subject; and thus, though the operation is a simple one, they cannot perform it aright. For this reason we shall occasionally devote a page or two of our Journal to it; and we shall endeavour to do this in as simple terms as possible.

Every one knows that the only means of obtaining permanent successions of the same identical plant or flower is by getting perfect seeds; and it follows, by very obvious analogy, that if we wish to obtain new varieties of any species, we must, generally speaking, impart the principles of those varieties to the seeds by artificial means. But still all that we can do is the mere application of substance to substance; and the progress of the new seed, and also the result of our new application, must always be the work of nature.

Now, in every plant there are three principles, or systems, any one or two of which may be so excited, either by natural or by artificial circumstances, as to get the better of the remainder. Increase of the plant by simple growth of the individual is the first of these; and to it the cultivator chiefly attends when he wishes to have his seedlings strong plants. As much moisture as the habit of the plant will bear, together with shelter from the inclemency of severe weather, and as much air and light as to prevent it from being drawn up and etiolated, together with the proper compost or soil, in its richest state, are the chief means resorted to for effecting this strong individual growth. To do it properly, however, those means must be applied with a requisite knowledge of the nature and natural habitat of the species, of the changes—if any—which have been effected in it by artificial treatment, of the situation for which it is intended, and of the kind of atmosphere to which it is to be exposed when finally planted out. Trees, which are the most lasting of plants, afford an illustration here: if the seedlings are run up in a richer soil and warmer situation than those in which they are planted out, they all become stunted, and many of them die; whereas, if the plants are reared in a bleak and exposed situation, they continue healthy and grow well in a rich and sheltered one. It is, of course, the same with perennial plants, which are cultivated for their flowers, and therefore, in the case of them, the soil in which the seeds are sown should not be quite so rich as that in which the seedlings are afterwards to be planted out. If the plant is wanted very strong in growth, flowering should be prevented by pinching off the flower buds just as they begin to appear; and if this is done, enriching and watering the ground will often produce a second growth in the course of the year; and many plants which naturally flower in summer may be by this means rendered autumnal; and autumn is the finest season for flowering, unless where the character of the climate is very rainy.

Increase of flowering is the second principle, or system, to the working of which the florist may direct his chief attention; but as it is far more complicated, and the active energies are far less known, than those of simple growth, it is much more difficult, and requires a degree of knowledge and experience unequalled in most of the arts, and exceeded in none. Still there is one general principle to guide the practitioner:—few flowering plants grow constantly, but rather by seasons, with pauses or intervals of repose, longer or shorter according to the character of the climate and the habit of the species. Now, the flowering is the last effort in these seasons of growth, except the maturing and the ripening of the seeds; and perhaps the latter of these is brought about more by the atmosphere than by any specific action of the plant itself. To obtain abundant flowering, in the general sense of the term, the cultivator must, therefore, endeavour to procure that state of the plant which is intermediate between its growth and decay if an annual, and between its growth and repose if perennial. This is, of course, obtained, in some degree at least, by diminishing that stimulus of the plant which produces shoots and stems; but care must be taken not to starve the plant or to check its growth too suddenly; for in either of these cases the plant gets sickly, and may never recover its vigour, or it may die in the effort of flowering; for the young practitioner must understand, that though the action by which it is brought about is very obscure, flowering is the severest effort to which a plant can be subjected. But, independently of this, there is always an object not quite natural to the plant; and this object varies considerably, and the treatment must be varied in order to accomplish it. One modification of it is to get an abundance of flowers; a second is, to obtain an increase of the number of flowers in proportion to the size of the plant; and a third is, to obtain flowers differing in colour, or otherwise in appearance, from those which the plant naturally produces. To obtain an abundant flowering, the soil must not be too rich, nor should too much moisture or too much shelter be given. We see this in great part when we examine the natural vegetation of different soils and situations; for the strong and sheltered lands, though they are favourable to the strong growth of plants as individuals, are never so flowery as the drier lands, to which the atmosphere has better access. It is true that both the sun and the air are apt to injure the petals of tender flowers; but this in all probability, more especially in as far as the sunbeams are concerned, may accelerate the process of maturing the pollen and the anthers, with which the petals are always in some way connected.

Another object is the obtaining of larger, handsomer, and more double flowers than the plant produces in a state of nature, and with all its systems working equally. The first of these is, in part, effected by lessening the quantity of wood, especially of that which is either past flowering, or would shoot again along with the flowers, and so impoverish them; and it is also in so far obtained by as stimulating a soil as the plant will bear, and due attention to watering and cleanliness. The second,—that of obtaining flowers nearly double, that is, with more petals,—is one of which the principles are not a little obscure. We know that the parts of fructification, more especially the fertilizing ones, are those which are converted into petals, in like manner as the fertilizable part of an abortive flower is sometimes converted into a shoot, and a shoot which occasionally produces a flower in the course of the same season; but by what process the change is effected we cannot very well understand. We know, however, that in every case where a single flower is converted into a double one which maintains its character, the anthers of the single flower are always numerous in proportion to the degree of doubling that can be obtained; and therefore the analogy would lead us to conclude that the production of petals is something intermediate between mere growth and the fertilizing of seeds. Therefore, the fair conclusion is, that this doubling is brought about by an intermediate treatment, arising from natural circumstances, from the efforts of the florist, or from the two jointly. Farther, the anthers are always diminished in proportion as the petals are increased; and sometimes the petals are so numerous that the parts of fructification are concealed, and their productive power is greatly diminished. Nature sometimes sports these double flowers; but it is doubtful whether any of these sportings will produce a permanent variety.

The Dahlia is a good instance of this doubling by difference of climate and culture. All the Dahlias are originally from Mexico, that is, from the table-land, where the average temperature is considerably lower than it is on the slopes toward the sea, which have a tropical vegetation. In respect of variation of heat, Mexico is not a much more seasonal country than Britain; but it is more seasonal in the alternations of rain and drought. In consequence of the first of these circumstances, many of the plants can bear any climate in the open air as long as the temperature is above freezing; and, in consequence, they are rather easily varied by artificial treatment. In its native country, the Dahlia has a single row of petals, and the centre of the disc is filled up with parts of fructification. The stems, which are annual, just as they are with us, die down in the commencement of the dry season, just as they do with us when the frost first sets in; and after the stems are gone, the tuberous roots remain inactive in the dry ground till the rains return. The season of their repose with us is the wet season; and if we leave them in the ground their flowers degenerate; but we get the better of this by taking them up, and keeping them dry during the winter and the very early spring. Our climate is thus more favourable to the simple growth of a Dahlia than the climate of Mexico; but it is not so favourable for bringing forward the parts of fructification, more especially the anthers, which appear to require the stimulus of more heat than any other part of the plant; and the consequence is, that the same parts which become stamens and anthers in Mexico, cannot get beyond the state of petals in this country. It is only, however, when highly bred that the Dahlia becomes so double; for if it is left year after year in the ground all the winter, the number of petals gradually diminishes; and parts of fructification, though not very fertile, in consequence of the want of stimulus, come in their stead. If, however, the very same plants have their tubers taken up during the winter, and are otherwise restored to careful culture, they again become double, though some of the reasons are too obscure for our observation.

Plants which thus admit of extensive variations in their growth or flowering, are always such as have the principle of life very vigorous in them, and are always very highly sensitive to physical changes of situation and treatment. The Dahlia and the Rose are among the most remarkable instances of this; and, though there are many natural distinctions, and innumerable cultivated varieties of both, it is probable that the whole of each are originally of one species. The men who deal in the systematic arrangement and nomenclature of plants, appear, however, to have very confused notions as to what constitutes a natural species of plant and what does not. Hence, in both the Dahlia and the Rose, many natural species are distinguished by them, of which the distinctions are brought about by geographical and other local causes; and therefore, the whole of each, how different soever in appearance, are really of one physiological species.

If we had the plants, and the circumstances to which their variety is owing, wholly within the scope of our observation, we should, in all probability, find that any one of these many varieties can be converted into any other by treatment; only much of that treatment lies without the range of our observation.

The third object to which the breeder of plants, and more especially of flowers, directs his attention, is the procuring of new varieties, whether in the general appearance and habit of the plant, or in the qualities of the flowers. This is a more complicated matter than the mere increase of flowering, or the size of the flower and the number of its petals; and almost all that is known concerning it consists of the results of experiments, which have been made upon a comparatively limited scale; and much more requires to be done before it can be brought within the limits of the philosophy of nature. A beginning has however been made, and after the lapse of future years and ages it may be brought to something like philosophy. When we seek to investigate the original cause of this breaking of species of plants into varieties, whether naturally, or by artificial treatment, we find the very commencement involved in the greatest obscurity. That there is in the species a constitutional tendency thus to break, we must admit; but we cannot always or easily find out the agents which act upon this disposition. We believe we may say that a plant which will grow naturally either in a moist or a dry situation, varies in appearance in these — the individual growth predominating in the moist, and flowering in the dry; and that, in proportion as the situation is drier and warmer in the flowering season, the tones of colour are more intense, and tend nearer to the warm or red end of the solar spectrum.

The subject is, however, one of very great difficulty, as well as importance; and on this account, as well as from our being limited as to room, we must take it by small portions at a time.

ON THE CULTIVATION OF BRASSIA.

BY MR. DON.

This genus is very near *Oncidium* in habit, but differs slightly in the form of the flowers. In my opinion, it is only a sectional division of the genus *Oncidium*, and ought never to have been separated from it; but as it is considered a genus, we shall speak of it as such. The pots or baskets in which it is grown should never be over large. If the plants are to be grown in pots, the pots should never be wider than a 24-sized pot, but should be more shallow, as they never require any great quantity of peat for their roots to run in. In potting of them, they should never be raised but very little above the rim of the pots. The pots should be well filled up with potsherds to within an inch and a half of the top; and the plant then should be placed in the centre, and the lower buds kept above the rim, so as to prevent their being rotted off with water, as that would be the case if the buds were below the rim; and they then should be neatly finished off with the peat, which should be very turfy. In putting them in baskets, the baskets should not be larger than six inches square, and about three billets in depth; and the billets should, at least, be two inches thick. A few potsherds should be placed at the bottom of the basket, and then very turfy peat and sphagum, in equal portions, should be used. In the growing season the house should be very moist, and the plants also should have plenty of water; but great care should be taken that no water gets into the hearts of the young shoots, as that will be sure to destroy their flowering, if it does not ultimately destroy the plant altogether. The heat should range about from 70° to 100°; and when they have finished their growth, and the buds show a fulness and at the same time no disposition to grow, the plants should be removed into the resting-house, there to remain till such time as they begin to grow. They then should be removed into the growing-house, where they will flower; and as soon as they are in blow they may be removed into the resting-house, to preserve the flower as long as possible. As soon as the flowers "go off," the plants should be removed into the growing house, and plenty of water given them, till such time as they have nearly finished their pseudo-bulbs; and then water should be, in a great measure, withheld altogether, as they will be much finer if they are allowed to get rather dry towards the completing of the pseudo-bulbs. There is no genus in all the tribe of *Orchideæ* more beautiful, and, at the same time, so easily flowered, if properly treated, as this is. The species belonging to this genus are very few at present; but there are some others that have not yet flowered; and as soon as they flower, and I know of them, I shall communicate them to the "FLORIST." I will now enumerate the species.

Brassia maculata, (spotted Brassia.) The pseudo-bulbs are ovate, compressed, of a pale green colour, furnished at the base with three leaves; and the apex of the pseudo-bulbs has one leaf, which is rather long and broad, of a pale green, rounded at the apex, and somewhat bifid. The flower stems rise from the base of the pseudo-bulbs, and sometimes they proceed out of the top. When the plant is in robust health, the number of flowers on a spike is from seven to twenty; which is a very large number. The sepals and petals are of a greenish yellow, spotted with brown; the lip is white, somewhat cordate, pointed, with two ridges at the base, which is yellow. The lip is somewhat spotted with brown. This plant may be grown and flowered in a 48-sized pot; but will not be so fine as if in a larger. A native of Jamaica, introduced in 1806. Flowers from June to July.

Brassia caudata, (long-tailed Brassia.) This is a beautiful and singular species, and a free flowerer. The pseudo-bulbs are ovate, compressed, of a rich green, with two leaves at the base, and furnished with two leaves at the apex, which are lancet-shaped and pointed, of a rich green. The flower spikes arise from the base of the pseudo-bulb. Each pseudo-bulb sends up four spikes of flowers, with from twenty to forty flowers on each spike. If the plant is healthy, the sepals and petals are of a greenish yellow, beautifully spotted with brownish purple. The three sepals have long cauda, or tails, which gives the plant the name. The lip is yellowish white, spotted with purple. At the base of the lip are two ridges the same as in *Maculata*, but they are slightly orange coloured. The lip is somewhat hastate, and pointed at the apex. The flowers are zigzag on the flower-stem, which is the case with all the genus. A native of the West Indies. Introduced in 1823. Flowers from June to July.

Brassia Lanceana, (Mr. Lance's Brassia.) This is another fine species. The pseudo-bulbs are much smaller than those of *Maculata*. They are rather broad at the base, much narrowed towards the top, and of a pale green. The leaves are broadly lancet-shaped and pointed. The pseudo-bulbs are furnished at the base with three or four leaves, and the apex of the pseudo-bulb has one or two leaves. The flower stems arise from the base of the pseudo-bulb, and sometimes from the apex. The number of flower spikes from each pseudo-bulb is from four to six, and on each spike the number of flowers is from twenty to forty. The colour of the flowers is a yellowish green, spotted with brown. Before the flowers begin to go off they change to a beautiful orange colour. When the plant has the two colours of flowers on it, it is really a lovely object. The spikes are somewhat pendant, which is the case with *Caudata*. A native of Surinam. Introduced in 1833. Flowers from May to August.

Brassia verrucosa, (warted Brassia.) This is a new species, flowered for the first time last year at the Tooting Nursery. The pseudo-bulbs are somewhat round, and slightly compressed, broad at the base, and very much narrowed towards the apex. They are furnished at the base with leaves, or rather bracts. The pseudo-bulb has two leaves, which are linear, lanceolate, and pointed at the apex. The leaves and pseudo-bulb are of a very dark green; the sepals and petals are greenish white, spotted with purplish brown. The lip is white, and covered over with little green tubercles or knobs. The lip is hastate at its base, with the ridges on the base of the lip, which is green. It is a very pretty species. A native of Guatemala. Introduced in 1836. Flowers from April to June.

Brassia cheirostachya, (long-spiked Brassia.) This is a very handsome species, and also a free flowerer. The sepals and petals are green, spotted with brown. The lip is white, spotted with brown. The flower spikes are very long and many flowered. The spikes are somewhat pendant, from the number of flowers that are on each. The spikes arise from the base of the pseudo-bulb, and generally two to each pseudo-bulb. A native of Demerara. Introduced in 1835. Flowers from May to September.

Brassia cochleata, (shell-flowered.) This is another singular and beautiful species, and deserves to be cultivated in every collection. It is very like the other species in habit, but differs much in the form of the flowers. The sepals and petals are greenish yellow, spotted with brown, and the lip yellowish white, spotted with brown. The ridges at the base of the lip are orange; the lip is somewhat caudate at the base, pointed at the tip. A native of Demerara. Introduced in 1834. Flowers from April to July.

Brassia Henchmanii. This species is allied to *Lanceana*, but differs in the flower, which in *Lanceana* is smooth, but in this species waved. The lip is also waved, and the colour of the flowers is greenish yellow, and they do not change colour as in *Lanceana*. A native of Demerara. Introduced in 1834. Flowers from May to June.

All this genus may be grown and flowered with ease in an ordinary stove, with the heat ranging from 50° to 70°. Therefore I would advise those who are afraid of the expense of building a house for *Orchideæ*, to grow this beautiful genus, as the expense of growing this singular and beautiful tribe is not near so great as many persons imagine.

P. N. D.

CALCEOLARIA.

WE have now many genera and species of plants which, on their first appearance in our collections, did not promise to be capable of much improvement by culture, but which have, nevertheless, become some of the principal ornaments of our green and hot houses. No stronger instance of this assertion can be brought forward than the genus whose title stands at the head of this article. The first species described, and introduced into Europe, from Chili or Peru, was in the year 1773, and it then ranked as a greenhouse annual. The next, a herbaceous perennial, was introduced in 1777; from which last date no other species made their appearance until the year 1822, when no less than four new species, two of them undershrubs, enriched our collections. From the very curious structure of their flower, and the facility with which they are propagated, they soon became favourites, especially after the seedlings began to vary in the colour of their flowers. Their property of having the flower and foliage very much amplified by judicious treatment, and their susceptibility of unlimited change of colour, has advanced them to a high place in the estimation of florists; and that they are worthy of such estimation will not be denied by any one who has seen the plate in the April number of the "JOURNAL," representing Mr. J. Green's five new seedlings. These beautiful varieties show such a wonderful departure, both in size and colours, from the originals, that it must be considered a most signal triumph of floricultural skill, as well as a most conspicuous instance of the versatility of vegetable membrane. Amplitude is the natural consequence of richer, or more suitable soil; and variety and intensity of the tints are also attributed by some florists to the same cause. Hence composts for both bed and stage flowers are commonly made of the richest animal materials that can be procured, in the shape of dung, gelatine, bruised bones, &c. mixed with the soil, or steeped in the water with which the plants are supplied. And although these common matters are easily obtained, and generally used for the specific purpose of improving the colours, and enlarging the blossoms, and is a practice founded on experience—the best of all preceptors—it is not every florist who can tell what those peculiar qualities in the substances used are which effect his purpose. Chemists tell us that those substances contain oxygen, hydrogen, and carbon, as well as ammonia; but whether it be all these in combination, or any one of them in excess, which effects the change, is not generally known. Here an ardent floricultural chemist might be an useful man in his generation, if he would only explain to us the cause of accidental colour in flowers, and how we might be able to produce them at pleasure. The custom of blooming plants in water, presents a fine field for chemical experiment, as to how far the tints of flowers would be affected by various chemical principles introduced into the water. In this view of the subject, namely, extending our knowledge and our means of artificial floriculture, there is yet much to be discovered and practically applied.

We are quite certain that the colours of flowers are changed by some quality in the soil in which they are planted, but we are mostly ignorant of what that quality is. Even among plants in a state of nature, the normal colours are completely lost. The little *Campanula rotundifolia* is found with white as well as with blue flowers; and the *Scilla non scripta* is often met with white and flesh-coloured flowers growing in the midst of a bed of those of the natural blue colour. There is no accounting for these changes except by saying it is an accident! And, as happening to wild plants, there is indeed no means of even guessing at the cause; nor is there, even among highly cultivated plants, such as the *Calceolaria*, any appreciated indications why one individual plant shall exhibit white, and another have deep purple blossoms.

It has been long ago noticed, even by *cow-boys*, that if a primrose, or a cowslip, happens to be dropped upon by one of the herd, the flowers of that plant will be *brownish*, not yellow, on the following year; and perhaps it was from this accidental circumstance that florists were taught to enrich their flower beds with manure, as well to give colour as luxuriance to their plants. Be this as it may, it is a fact that cow-dung has this effect; but how it operates, or what quality of it is the actual agent, is, except to chemists, perhaps, unknown.

The above observations are made with the view of calling attention to the particulars alluded to, and which should really be made a part of the florist's studies in connexion with what may be called the *capabilities* of his art; for whenever there is any uncertainty or obscurity attending or hanging over the results of his practice, these he should endeavour to clear away.

Many other flowers may be pointed out which have been reclaimed from rustic simplicity to a very high degree of floral beauty; and it is a principal part of the florist's amusement, as well as his duty, to originate new varieties, either by cross impregnation, by improved kinds of compost to give colour and amplitude, or by any other means his ingenuity may suggest.

M.

April 26, 1841.

QUERIES, WITH ANSWERS BY MR. DON.

In May last, I purchased of a highly respectable nurseryman four Azaleas, two white and two purple. The white ones have flowered extremely well, but the purple ones not at all. On moving them from the pots a few days ago, I found the roots so tightly bound by the soil as to prevent any healthy growth. What plan should I adopt to give them a better chance of flowering next year?

H. W.

During a tour in Ireland, a few days ago, I took up, at Fairhead, county of Antrim, two odoriferous plants, which I was told are the Bog Myrtle. In the carriage the foliage of them has gone. What mode of treatment should I adopt in order to start the plants into growth?

J. H.

ANSWERS.

With respect to the Azaleas, I have to say that the purple are much more difficult to flower than the white. The best mode of treatment is this:—When they have done flowering, they should be put into a house, a pit, or a frame, kept pretty closely shut up, well syringed every morning and evening, and watered till they have completed their growth. They then should have a little air; and as the wood becomes firm, and the bud at the top of the shoot becomes hard, they should have abundance of air, or be turned out of doors night and day, if not later in the season than the month of August; but they should be taken in before the frost comes, as that invariably destroys the more delicate and valuable ones. Should the Azaleas not flower, or show any signs of flowering, next season, you should put them into a house, pit, or a frame, keep them closely shut up, and syringe and water them as I have recommended; but they should not be started before the beginning of May, or until such time as they show signs of growth, without any artificial means to induce it.

Azaleas should not be repotted oftener than once in two years, as they do not flower nearly so well if often disturbed. When they become large plants, requiring large pots, they should be shifted as seldom as possible; but they ought to have plenty of water in the growing season; and when it becomes necessary to repot them, that should be done as soon as the flowering is over, and then they should be started into growth for wood. They should be kept rather cool until the growth is completed and the flower-buds pretty large. After this they should be placed in a moist and rather warm atmosphere, in order to get the flowers to expand, and then they should be removed to the greenhouse to finish their flowering.

The Bog Myrtle will grow and flower very well if placed in any shady situation out of doors, and planted in a compost of peat and sand. The other odoriferous plant I do not know, not having seen it; but if it was found along with the Bog Myrtle it should be treated the same way as that.

P. N. DON.

NOTE BY THE EDITOR.—The correct and circumstantial directions which our highly-esteemed correspondent gives for the cultivation of Azalea induces us to add a few remarks, in order to render the account more full, for the benefit of those tyros who are only beginning to study the nature of plants. The Azaleas belong to the same tribe and genus of the order of heaths as the Rhododendrons; and they have this property in common, that the bringing forward of the flower-bud is the last effort of growth in any one year, and the expanding of the same flower is the first effort in the year following. Thus the season of growth for increasing the individual plant is in the latter part of the summer, and the flower-bud, which is always terminal, advances and becomes firm in the autumn.

Plants which have this habit require a peculiar treatment, especially for the production and ripening of new wood, and the bringing forward of the flower-bud, so that it may be in condition of expanding well when the proper season comes. If the flowering is weak, or if the plants get too much water either naturally or artificially, while in progress of flowering, the buds which produce shoots, but not flowers, the same season, are apt to be started prematurely, and the flowering is imperfect and the plant weakened by the double operation. Very moderate watering, and shelter of the plants from the natural rain, are the best means of preventing this double or unnatural action, and securing perfection in the flowers and health in the plants. After the flowers have gone off, at full maturity, there is still a good deal of care necessary in regulating the after-growth of the plant, so as to secure vigour in the individual, and size and perfection in the flowers. Moisture is the grand stimulus to individual growth; and if this is given in excess, the energy of the plant will be so much exhausted as that it will be incapable of producing flower-buds in any great number, or in the more shy flowering varieties of producing them at all. On the other hand, heat is the grand stimulus to flowering in most plants; but not in those plants which, like the Azaleas, form and forward the bud toward the close of one season, and expand it in the beginning of the next. That the bud may be produced at all requires a certain vigour of the individual growth; and to obtain this, a certain degree of watering must be employed. This must not be, however, overdone; and the plant must be gradually let down in order to ripen the wood previous to the annual repose between the perfecting of the flower-bud and the starting of the flower to expansion. If the plants are kept too dry the shoots will be feeble and stunted, and the flowers will be small, or so abortive as to be unable to expand. To hit the medium between too much moisture and too much drought, during the season of individual growth and ripening of the shoots, is a matter of much nicety, and the proper knowledge of it is acquirable only by experience. Thus, though Azaleas are all either hardy or half-hardy shrubs, the proper treatment of them requires more skill and attention than that of many other plants which are upon the whole more delicate in their nature.

The Bog Myrtle, or Sweet Gale, *Myrica gale*, is a small procumbent shrub, growing in peculiar situations; and, though the scent of it is rather pleasant, it is not worth the trouble of cultivating except in botanical collections. It does not grow absolutely in the water, but it loves a spongy soil and humid atmosphere, with frequent rains, which keep up a low temperature; at least, these are the circumstances under which we have seen it growing most vigorously on the upland and boggy moors of Scotland; and we have never seen it on the higher slopes, or near the dells where the soil is kindly.

THE WEATHER FOR JULY.

During this month, the temperature has been much lower than it usually is at the same season of the year. The sky has been much overcast, and a good deal of rain has fallen, not in continuous and extensive downfalls, but in heavy local showers, often with lightning and thunder, and sometimes with hail. The intervals of these showers have generally been such as to allow much of the rain to be taken up by evaporation; and by this means, the communication between the earth and the atmosphere has been re-established in rather a tranquil manner. The alternation of showers and evaporation has kept the air cool, and the out-door vegetation moist, circumstances that are highly favourable to the growth of the individual; but by no means so for flowering and fruiting, which have been kept back in most instances, and if more sun and heat do not set in, there will be many failures.

On the field vegetation the effect has, generally speaking, been beneficial. The aftermath of the hay is uncommonly green and vigorous; turnips promise well, and the corn has acquired length and strength. On some of the rich soils it is partially lodged, but dry weather will bring it up again. It is possible that, in some of the more early districts, the blades—the anthers—may be partially beaten off; but if this has happened it will be more than compensated by the increase of the general growth. The hops have, it is said, had too much rain; but the progress of these is quite a gambling matter.

Culinary vegetables have been abundant and of handsome appearance, though perhaps not so highly flavoured as if there had been more sun and drought. The Midsummer shoots are vigorous both upon trees and shrubs; so that, if the autumn is favourable for ripening the mould, flowers and fruits should be abundant next year. The leaves are in fine condition, not spotted with brown; and it is probable that many of the root-destroying larvæ are

kept down by the cold and humid surface; but if the moist weather continues, snails and slugs will be great pests.

If dry weather sets in, the autumnal bloom on the borders will be very fine; but in the meantime, some blooms—as for instance, those of the very double roses—have a difficulty in expanding; and if the rains continue, matters will be still worse:—the rain not only, as it were, solders the outer petals together, but it stimulates the individual growth of the plants; and therefore, if it continues much longer, we may expect to see shoots rising in the middle of many of the aborted roses.

Prognostications of the weather are but quackery, or, at the best, guess-work; because we never can number half the circumstances of any former case, and thus we cannot reason from any thing like a perfect analogy. But as the intercourse of the earth and the atmosphere has been re-established without any very violent or general struggle, the conclusion naturally to be drawn is, that the autumnal rains will not be very surly or very heavy; and the inference from this is, that the winter should be mild.

CALENDAR FOR AUGUST.

STOVE.—Attend to the general cultivation of plants here as directed for last month. Specimen plants, when they require it, may be repotted for the last time. This is an excellent time for budding, grafting, and general propagation. Cape and other bulbs that have completed their summer's growth may be dried off, though, as the principal thing to be attained is a good growth, it should not be done too soon or too rapidly.

GREENHOUSE.—Hard-wooded plants, that have completed their seasonal growth, should be watered sparingly; Camellias frequently lose the buds by being stimulated to a second growth at this season by overwatering. A thorough ripening of all the parts is what is most required. Propagate by cuttings, buds, &c. every thing it is desirous to increase. Leave air every night unless the end of the month is cold. All repairs should be completed as fast as possible.

FLOWER GARDEN.—American plants do not require so much water now. That the wood may ripen well, repot Auriculas. See that the pots used are clean, and keep a good drainage; for on this depends the safety of the plants during winter. Finish laying and pipeing Carnations, Picottees, Pinks, Pansies, and other biennials. Fine sorts of Dahlias may still be propagated, though there is some chance of losing them in the winter. Blooming plants should be kept tied up, and thinned, where required. Look closely after earwigs. Chrysanthemums struck last month may now be potted. Place them on a warm border, with bricks or tiles under the pots, to prevent worms entering. Water them when the sun shines on them. No plant repays the little trouble required more than these. Seeds of hardy bulbous-rooted plants may now be sown, and their roots taken up and replanted whenever necessary. The seeds should be sown in pans or shallow boxes, so that they may be removed to a cold frame, or other shelter, in the winter months.

FLORICULTURAL INTELLIGENCE.

It gives us great pleasure to notice that this year a very decided improvement has taken place in the Floricultural Exhibitions, both metropolitan and provincial. Formerly, and long before the commencement of our labours in this journal, we were of opinion that the common Flower Shows rather injured than promoted the true art of Floriculture. They appeared to us to be got up by an interested clique or junto for such Society, during the period of its existence, which was often a very brief one; and the main objects seemed to be to get the flowers of the clique praised and brought into notice, and the owners gratified with tea-pots, snuff-boxes, and other small wares. In those days we fancied, or at all events feared, that the Horticultural Society was not entirely free from a slight leaning toward this conduct. It is true that, without funds derived from the public, the Society could not be carried on; and it is perhaps equally true, that without prizes of some description or other, the more experienced growers could not be made to attend. But all these are, or ought to be, in their nature mere supplementary matters, somewhat like a go-cart and leading-strings to a child, or a pole to a sapling; and when an establishment acquires such strength as that it is able to go on of itself, or stand on its own legs, it is much better without them. It is true that there is a considerable difference between the prizes awarded by the Horticultural Society and those which used to be, and we believe still are, given to members of the clubs alluded to. These last were generally articles of some domestic utility, such as a tankard or a tea-pot, a pair of sugar-tongs or a spoon; while the awards by the Horticultural are honorary medals, not so well adapted for being displayed and boasted of by women and children; and besides, implying that the contest is for glory, not for gain, at least in the domestic value of the prizes. This is decidedly an improvement: and it would be a greater improvement still if these honorary tokens were taken in bronze or white metal, so that their pecuniary worth might be next to nothing. As it is, we think that we can perceive a very beneficial effect resulting from this improvement in the way of prizes. The impulse to Floriculture is becoming greater and greater every year; and in so far as the gardens are concerned, the advancement of this season above the last seems to be greater than that of any former instance. So great has it been, indeed, that the flowers now take the lead on the Society's gala days of exhibition. At one time we thought too much attention was given to other kinds of display, and that the plants were but a secondary object to many who attended the gardens. Perhaps this was a necessary state of things at and near the commencement; for the collecting of immense masses of people, many of them of the highest class of society, was a novelty, and not a novelty of the kind which used to attract British audiences. It gives us great pleasure, however, to think that the result has turned out highly favourable to the promotion of Horticulture, and more especially that delightful branch of it in which all may to some extent participate—the cultivation of flowers. We do not mean that the Horticultural Society has produced the whole of this good; but it has set a splendid example, and the result has been a new and vigorous impulse which has diffused itself over all the country.

The time has not long gone by when the few new plants which were sent to this country, by persons in the employment of government chiefly, and persons who knew or cared little about the science of plants or the means of their cultivation, were huddled into corners, and carefully concealed, not only from the British public, but from British horticulturists. So strictly was this system of concealment adhered to, that the first accounts which the country received of these new plants were generally in German publications. A plant may have been ten or a dozen of years, or more, in its hiding-place; and a slovenly mode of culture, in which little or no attention was paid to the native habitat, or natural habits, of the plant, may have succeeded in obtaining a duplicate; or if the seeds were sent home, little as was known of the proper soil and treatment of them, more than one may have germinated. Then the duplicate thus obtained was sent as a royal present to some foreign power, and published and multiplied there. So that, after a lapse of years, a British florist could import from abroad that which originally came to his own country. Such a state of things could not fail in repressing whatever love of flowers and their cultivation there was in the country, at least in so far as new plants were concerned; and thus our florists were confined to the old plants, in the treatment of which they were also excelled by many foreigners. It is true that, even in the thickest darkness of this absurd system, the love of Floriculture could not be wholly kept down; for there were always some spirited individuals who, from time to time, sent collectors to such parts of the world as were

love of paying proper attention to them; and it is not easy to say how many of the coarser means of spending surplus money, which formerly prevailed in this country, to such an extent as to make us a byword among foreigners, have been rendered unfashionable by the more delightful pursuit of floriculture, as it relates to flowers, to fruits, or to plants generally.

This opens a wide field for contemplation, and a field as delightful as it is wide; but, having no room to enter upon it, we must confine ourselves to a mere notice of some of the more striking results.

Among these results we are disposed to give the foremost place to the great public exhibitions at the Horticultural Society's Gardens. At first these were, no doubt, effects; but on such subjects, effects, in their turn, become causes. The spirit which has thus been produced, whatever may have been the means of its production, has become very general; so that there is not a town or district of any importance, but which has its horticultural society, and its exhibitions of flowers, and generally also of fruits and culinary vegetables; and these are not, as in times gone by, confined to certain knots of professional cultivators, but all the people of taste take an interest in them; and amateurs contend with professional men as to who shall produce the finest specimens, and thus contribute most to the advancement of the art. This is as it should be; for amateurs can, generally speaking, best afford the time and the expense of making the requisite experiments by means of which the improvement of the art is led on. Then there is a great advantage in the rivalship of those wealthy amateurs: they are rivals in the improvement of plants and their modes of treatment, but they are not mercantile rivals. We could, however, mention several wealthy and influential parties who allow their gardeners to dispose of some part of the product of their skill and industry to nurserymen, which is no inconsiderable advantage both to the art and to the public.

These remarks very naturally suggest themselves when reflecting on the great floral exhibitions, especially such as that which took place at the Society's Gardens on the 10th of July. The number of exhibitors upon that occasion, and the variety and beauty of the subjects exhibited, were such, that even a bare list of them would exceed our limits, and the particulars are already before the public. We may mention, however, that the number of medals given upon that occasion, chiefly for flowers, (for the fruit, though excellent in kind, does not admit of so much variety,) was no fewer than one hundred and nine. Of these, five were the Gold Knightian, eight the Gold Banksian, twenty-four the large Silver, thirty-two the Knightian Silver, and forty the Banksian Silver. So far as we can judge, too, the distribution of these honorary tokens was most impartial, and guided apparently by nothing but the fact of showing the finest specimens. The number of professional growers—that is, of growers for sale—who received medals, was but a fraction; and the number of members so receiving was also comparatively few. The great majority were awarded to gentlemen's gardeners, which, of course, contributes more to the general diffusion of the love of the art, than if it were to rain gold medals upon the profession only.

Of the subjects shown we have no room to give even a list. At this season of the year the flowers in greatest perfection are those of hardy, half-hardy, with a few tender shrubs, and also border flowers. The early blossom of the more delicate stove plants is about over, and of those which flower later barely begun. The season of the bulbous-rooted plants is also, generally speaking, over before Midsummer; and the autumnal blooms in the borders have not yet come up. Among the choicer herbaceous plants which form a sort of connexion between the early and the late, the Carnation and its relative the Picottee hold a conspicuous place; and though both of these are old flowers, they are flowers which will never get out of date; and they deserve the estimation in which they are held from their fragrance, as well as from the shape, the colour, and the exquisite odour, of the flowers. The introduction of autumnal roses, and the numerous crosses between them and the roses of the early season, have given to these flowers a period of bloom of which nothing was known in former times. By a little management some of the varieties may be made to bloom in the latter part of March, or the early part of April; and what with one species, what with another, the succession may be kept up until the last roses of autumn are destroyed by frosts or heavy rains. The number shown on the occasion alluded to was not very great, but some of them were choice, especially the hybrid variety Devoniensis. The heaths, the fuchsias, and several of the other flowering shrubs, were exceedingly fine; and the picottees were abundant, considering that the season was rather too early for them. The number and diversity of subjects were, however, so great, and the choicest specimens of each had so many peculiar beauties, that no intelligible notice of them can be given, unless it were a detailed account seriatim; and that would require a pretty large volume to do it justice. Fortunately, however, it is not the individual plants which are most interesting to the public: it is the evidence which the whole exhibition afforded of the attention which is paid to floriculture, and of the ample reward which that attention is receiving.

Various other shows have taken place in the course of the month; but none of them equal to this one in extent, in interest, or in influence.

This awakened spirit of the love of floriculture, of flowers, and of every thing connected with flowers, is not confined to floricultural societies, metropolitan or provincial,—to the possessors of greenhouses, conservatories, and stoves, in which the plants of all regions may be successfully grown,—or even to those who have nothing but open gardens in which they can rear beds and borders of flowers: it has found its way to those who have only a few windows in the different apartments of their dwelling, or even a single window to the room which is their sole abode; for even there they will have a flower, and vie with each other who shall have the finest one. The influence of this is more beneficial to the moral character of society than many are aware of; for the attachment of the people to an innocent pursuit, if strong enough, weans them from many others of the opposite class. Since the higher species of floriculture was introduced into the upper classes of society, there has been a great coldness towards the pursuits in which but too many of them were wont to engage; and the chase, the betting-stand, and the gaming-table, have all fallen in the estimation of fashionable society, at least, with a few exceptions, since flowers became so much the objects of attention. As we descend in society the effects are perhaps still more beneficial, (although the example of the higher classes is in itself a great benefit;) for the love of flowers has withdrawn many of the middle classes from their out-door dissipation, and many of the humbler ones from the alehouse.

Every thing in which the whole family, old and young, and females as well as males, can take a common interest, and which is innocent and pleasurable in itself, is a great and general blessing to society. The most numerous nation or community is but a family on a larger scale; and if there is this similarity of feeling in families, there will not fail to be harmony in society, by means of which the people will work in concert, all classes doing good, and each contributing its portion to the welfare and happiness of the others. This is far more likely to be accomplished by that which is an amusement and a pleasure, than if it were a task imposed. Tasks are, of necessity, different in the different classes; and so are many of the pleasurable and amusing occupations. The love and the culture of flowers, if pleasurable to all, are substantially the same in all; and the simplest flower-pot differs not in kind from the most costly array of conservatories and stoves.

Then there is absolute knowledge, and very useful knowledge, accompanying this attention to flowers; and it descends to much humbler classes of society than those who have not reflected on the subject are aware of. Most people, except a few of the outcasts of society, are now capable of reading; and books containing accurate and useful information are within the reach of all, and want only a proper stimulus to cause them to be read. Now, a very limited collection of plants may have very great effects in this way. We love and admire the plant, and the result of this is a desire to know everything about it,—as, whence it comes, what it is good for, and so on for a long succession.

But if a man is properly embued with a love of a few flowers, he naturally wishes to have more; and extensive collections are now so numerous, and so generally distributed over the country, that there is little or no difficulty in getting this wish gratified. But those extensive collections include the flowers of almost every region under the canopy of heaven; and the desire of knowing the flowers naturally leads to that of knowing every particular respecting the countries in which they are produced. Thus, he who examines in the right spirit a collection of those beauties of creation, is by them put in train for acquiring the most extensive and the most useful knowledge. He is told, for instance, that a certain plant, which strongly attracts his attention, is a native of Brazil, of Southern India, or of any other country, as it may be. This sends him to his books; and as he can easily obtain an account of the country which he wishes to know, he acquires a knowledge of it, not as a task, but a part of the pleasure which he derives from the love of flowers. Nor must it be supposed that his knowledge will confine itself to the habitat of the particular flower, or to the circumstances under which it grows; for if the love of the plant is strong enough, it will carry him in desire to its native country; and when once there the desire will extend to every thing that can be known about it: to the people, whence they came, what they are like, and how they are fed, clothed, lodged, and occupied; to the country itself, whether it is mountainous or flat, whether bare or wooded, whether parched with drought or abounding in streams; to the seasons, whether they consist of four gradually blending with each other on their confines, as with us,—or whether drought and moisture, or cold and heat, alternate violently with each other, as is the case in the extremes of climate; and to the mineral and surface productions of the earth, in so far as the one and the other may be useful to man.

This is the natural and very delightful result to which the love of plants tends; and it has been rendered much more certain by the improvements of modern times, by the introduction of a great variety of new plants, and by the *establishment of something like a natural system. In former times, when* cultivated flowers were few, and their native habitats but ill understood, the love of plants pointed to no such result as this. The florist was then a mere artist, who had no farther object than making a better article out of the same materials as his neighbours used; but now it is scarcely possible to become a florist without becoming a philosopher, or to continue long in the practice of the art, even as an amusement, without acquiring a great deal of general knowledge.

THE

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SEPTEMBER 1, 1841.

TREATMENT OF THE CARNATION.

IN SUBSTANCE PARTLY FROM MR. HOGG, OF PADDINGTON.

WITH PORTRAITS OF PUXLEY'S PRINCE ALBERT CARNATION AND QUEEN VICTORIA PICOTTEE;

(*Mr. P. being Successor to Mr. Hogg.*)

IN the "FLORIST'S JOURNAL" for March last we gave, along with the figure of variety sent by Messrs. Youall, of Great Yarmouth, some brief notes on the Carnation and its variety, the Picottee. In speaking of the two varieties, we may say that the Carnation, whether Flake or Bizarre, is the more gorgeous flower, and the Picottee the more light and airy. Picottees with a yellow ground do not preserve their character very well in this country, though in some respects they are more hardy than Carnations. We are not acquainted with these flowers in a state of nature; but there is some reason to believe that the Flake is, as it were, a first departure from a self-coloured flower with a single row of petals; that the Bizarre is a second and farther departure from this flower; that the Picottee is a still farther departure, and the yellow-grounded Picottee the farthest of all. This is in so far corroborated by the fact, that the characters are more and more difficult to preserve in proportion as the variety deviates more and more from the self-coloured flower; and the inference from this is, that the native habitat is warmer and drier than the middle latitudes of Europe, and consequently there is a tendency to lose the climatal distinctions which have been produced by those differences of latitude. In Germany, and especially in Holland, though the climate is not warmer upon the whole than that of

Britain, these plants preserve their artificial character much better; and this seems to be in great part owing to the superior dryness of the summer. From this it should follow that, even though the artificial compost and treatment are the same, Carnations will succeed better where the air is dry than where it is comparatively humid, though this may not be observed in districts which are near to each other, how much soever these may differ in their general soil and in their atmosphere.

As is the case in all highly-bred and very double flowers, the power of perfecting seeds is very much diminished in the Carnation—more so than in most other flowers; and the consequence is, that the skill and attention of the florist are rewarded with very few choice varieties grown from seeds, as compared with most plants upon which he exercises this very ingenious and most interesting branch of his art. In every case, the multiplication of the petals diminishes the fertility of the flower; for the growth of petals is something intermediate between the growth of stems and leaves and that of the part of fructification. If, therefore, a florist wishes to obtain good Carnation seed, he must carefully find out the medium between stunting his plants by too poor treatment, and stimulating them so highly, that the tendency is more to the production of stems and leaves than to that of flowers, and especially of perfect seeds. No general rule can be laid down for the compost best suited for this medium state; because in proportion as the atmosphere to which they are exposed is more dry, the plants require a richer soil and more artificial watering, whereas in humid atmospheres they require more exposure, especially to dry and gentle winds.

Obtaining seed of Carnations in this country is, as we have said, very difficult, and in the case of yellow Picottees next to impossible; and even when perfect seeds are obtained, good new varieties are so rare, that the obtaining of a single one from a considerable sowing is a matter of lottery. But, as a choice new plant is prized in proportion to the difficulty of obtaining it, and as cross impregnation is the only means of doing this, it must be resorted to notwithstanding its difficulty and the small chance of success.

In all cases, whether of cross or of natural impregnation, the number and vigour of the seeds depend more on the maturing of the pollen than on the preparation of the stigma for its reception.

The perfecting of the anthers and their pollen is, indeed, the highest effort of vegetable life, the one most removed from ordinary growth, and therefore it requires more of the stimuli of heat and light, and less of those of soil and humidity, than any other portion of the growth. That this is a general fact is already pretty well established by experience, but the present season is one the effects of which should be carefully watched and noted, especially in delicate and difficult cases, such as that of the Carnation. The flowering season has been remarkable for the absence of heat and light, and consequently for the presence of their opposites; and therefore the natural conclusion is, that those more delicately-produced seeds should be few and imperfect; yet it by no means follows from this that the blooms of the season should be dwarfed and imperfect; for as the diminution of the number of anthers increases that of the petals, so the weakening of fertile energy in the anthers should give greater expansion to the petals; and so far as our observation has gone, the facts verify this for the present season.

As Carnations are most deservedly favourite flowers, and as the treatment of them for mere growth and blooming is not a very difficult matter, far more are required for the satisfying of the public demand than can be obtained from seeds.

The best general compost for Carnations consists of one part of yellow virgin loam, half a part of black mould, two parts of thoroughly-rotted horse-dung, with clean gritty sand, as an internal drainage; and the quantity of this depends upon the nature of the loam; these should be kept in a heap where the surface is slightly depressed, and worked and turned till they are thoroughly incorporated, and the whole compost has one general action. This will do for seeds, for layers and pipings, and for the plants when sufficiently grown and established for flowering. In obtaining seeds of plants so highly cultivated something more than the mere effort of nature is necessary. Care must be taken that the flowers expand well, and the pods increase equally on all sides. The pods have sometimes a tendency to stop short in their growth, and open at the edges of all the sepals, and sometimes to burst along one side. The general cause of this is too long a delay of that water, either by nature or art, which is necessary while the plants are in flower; and indeed until the seed vessel has obtained its full size. The drought hardens the sepals, so

care should be taken of the styles, because their function continues long after the act of impregnation. The seeds should be thoroughly ripened, which is known by the firmness of the seed vessels, and their becoming dark brown or black. The seed should remain to dry in the pods till about the first of January, when it may be rubbed out and kept in a paper bag or a bottle. Toward the middle of April is the time for sowing. This should be done in shallow twenty-four sized pots, or in shallow pans; the compost not quite so rich as that generally used, but very finely pulverized. The surface of this should be made level, the seeds put in, a quarter of an inch of the fine compost put over them, and the surface should again be levelled. They then should be covered with glasses, of which common window glass in lead frames is the best, and the glasses should be kept on till the young plants appear. Even after this, the seedlings ought not to be stimulated with too much water, because that makes them spindle up and flower prematurely, in which state there are few branches of grass, which branches are always the most valuable part to the grower of Carnations. The seeds are apt to spurt in the formation; and these spurtings are rarely for the better; and this, with the extreme rarity of good seedlings, and the fact that they are two years in flowering, and all this time and the attention may be thrown away upon rubbish, are much against this mode of breeding.

Piping and layering are preferable; because the qualities of the plants are already known, and they come sooner into flower, and are less liable to spurt. Pipings, or cuttings, should be taken off about the beginning of July, but not to such an extent as to impoverish the appearance of the parent plants; for if they look poor from excessive cutting, the chance is that they will not flower so well. It is of advantage too, that the cuttings should be taken off before the flowering has so much advanced as that the proper growth of the plant is weakened; because it is this growth, and not flowering growth, which is essential to the cutting. Thus, early cuttings get more fully established, and can stand the winter better than late cuttings or layers. The cuttings should be taken square off immediately below a joint, and trimmed to about three joints in length. The grass at the lower joint should be carefully stripped off, and even a little higher than this if the joint is short; for if any part of the grass is buried below the surface in planting the pipings, it will decay and communicate disease to them. The best soil for them is a little bed of dung or rich compost, raised two or three feet above the surface, to prevent the possibility of stagnant moisture; this should be watered, the cuttings planted about three quarters of an inch deep, and the ground watered again; but the glasses must not be shut closely down until the cuttings are dry. They should be lightly shaded during the hot sun; and if the weather is very hot and dry they should occasionally get a gentle watering, and after about two weeks they should have air. In six weeks they will be ready for transplanting into small pots, or placing in a bed with a frame and lights over; and they may remain until about the middle of September. If they appear diseased, and show mildew or mucus, they may be thrown away as useless; but if they are healthy, though they have not fibred, they may be put under glass, with a little artificial heat, until the fibres are started; and then they have every chance of doing well.

In layering, the operation should be begun toward the end of July; and the branches next the ground are the fittest for it. The first step is to trim off with scissors the grass toward the root, having previously given the plants a good watering. The surface of the mould must then be stirred, about half an inch of compost added, and all is ready for the operation. This is done by a slanting cut on the under side, begun about a quarter of an inch below the joint, and carried right through that to a quarter of an inch above. The layer is then to be bent gently upwards, and the tongue cut square off immediately under the joint, because that is the place where the fibres are to be produced. The cut part is then to be pegged down, and covered with compost to the depth of three quarters of an inch, and if any of the mould is displaced in watering it, it must again be put to rights. In about six weeks, more or less, according to the season, the layers should be taken off and potted at about three in a 48, or two in a 60; and the pots should be so placed as to prevent the entrance of worms. They must not be planted too deep in the pots, and great care must be taken that none of the side leaves are buried, as that will infallibly destroy them.

Toward the end of October they should be removed to that station where they are to remain for the winter. If they are in frames, the bottoms of these should be covered with a layer of coal ashes, to keep out the worms and give a uniformity of temperature. The frames should be raised on bricks, to give air below; the lights should be taken off during the day in dry weather, and air let in at the backs when the weather is moist; and even in a mild frost a little exposure will do good rather than harm. This treatment may be observed till the very cold weather sets in, and then they may have a little protection; but still air is useful whenever it can be safely admitted. The surface of the mould should be kept loose by stirring, or covered with loose sand.

CONDUCTOR.

ROSES, ESPECIALLY AUTUMNAL ROSES.

THEIR KINDS, CHARACTER, AND CULTURE.

THE Rose has been from time immemorial—indeed, from before the commencement of authentic history—*the* flower *par excellence;* and it still retains the throne of its early glory, notwithstanding the multitude of new flowers that have been imported or bred out of the old varieties by art, and the extreme beauty of many of these; and in one or other of its varieties or modes of treatment, it is a flower of all civilized countries: it is a flower accessible to people of all ranks, and generally possessed by them if they have even the smallest plot of ground. The cottager is in great part won from grosser occupations in his leisure hours by attending to the Rose trees which adorn his little patch of ground, or are trained with wild and luxuriant grace upon the rude walls of his cottage, making the whole to appear like a favourite work of nature in one of the gayest of her sportive moods. Then, if the man of rank and wealth is in possession of a complete bed of Roses, with their dwarfs, shrubs, standards, and pillars, all in the luxuriance of bloom, he has a collection of beauty and a richness of perfume which no other production of art and nature can equal.

Roses are natives or thoroughly domesticated in all climates, more especially in the middle latitudes of the eastern continent, including India, Persia, and a considerable part of northern Africa; and if they are less abundant in America, it appears to be owing to want of culture, rather than of a proper climate. In

South America, in Australia, and in the islands of the Pacific, we believe, there are no Roses, although the soil and climate are not unsuitable to them. In China they are general ornaments; on the plains of India, there are not merely acres but square miles grown for the manufacture of the costly and exquisite *attar of roses;* Persia, Syria, and some parts of Egypt, still retain their ancient celebrity for these lovely plants; and Pæstum and various other ruins in Italy stand monumental of the attention paid to them by the luxurious Romans. The Rose, in one or other of its varieties, is acclimated to every region, from the hottest plains of Asia to the slopes of the Scottish mountains, where the little *Rosa spinosissima* grows in the utmost perfection.

What is even more remarkable, the Roses of every climate appear to be capable of uniting with those of every other, not as mules or hybrids, as they are improperly termed, but as fertile and perfect varieties. The obtaining of those varieties by cross impregnation is one of the chief arts of the florist; and one in which he is more successful than in many others. Since so many new varieties of Roses were imported, especially from France, or from warmer countries, they have occupied the attention of the floriculturist far more than they did before. Many of those new Roses are autumnal ones, that is, they require a larger continued heat to make them bloom in our climate than the older Roses. The consequence of this has been a vast prolongation of the season of Roses. By proper selection and culture some of the earlier Roses, under shelter, may be made to bloom as early as April, or even as the end of March; and the bloom may be kept up in different varieties, and with proper treatment, till the middle or near the end of October. Thus there are, even now, only between three and four months of the year without blooming Roses;—some of the China ones, if on a warm wall, bloom over the snow; and it is not too much to expect that ere long we shall have a regular succession of blooming Roses all the year round; and that many which now expand their buds late in the spring, and shed their leaves early in the autumn, will either be changed to evergreens themselves, or have their leading properties imparted to others which are evergreen. Most, if not all, of the summer or early blooming Roses perfect their seeds with us; and the same is the case with a few of the earlier autumnal ones; so that, if the first attempt is not made between varieties too different in character, cross impregnation succeeds among the principal part of these, and they may be varied without end.

There are three principal ways of propagating Roses,—by seed, by layers, and by budding on the brier. Early flowering Roses, which ripen their seeds, may be treated in any of these ways. The seeds are ripe about the beginning of November; and they should be kept dry and protected from mice until about the end of February, which is the season for planting. If they are to be excited the first year, they will not appear later than May; but they often remain till the second year without being rotted. The seedlings must be a month in pots, and shaded by hand-glasses for the first few days; and by the beginning of September the vigorous ones are usually far enough advanced for being budded on short stalks. Thus treated they will bloom in the third year, whether they are naturally impregnated or crossed. The usual time for planting out these early Roses is November or December; but if the soil is cold and retentive, the operation is better delayed till February.

Budding on the brier is by no means a difficult operation, only it must be neatly done; but for the early Roses layering is perhaps preferable. The layer is prepared in a manner similar to that of the Carnation,—and is indeed much the same in all plants that admit of the operation,—only the Rose requires to be pegged down deeper than the Carnation, as Roses are more deeply-rooted plants. Besides these methods, Roses may also be propagated by dividing the roots; but this can be effectively done only during the time that the plant is in a perfectly quiescent state. It has the advantage, however, of furnishing flowering plants at once. The proper soil and compost for all Roses is a mixture of fine rich loam and well-rotted leaf-mould and stable-dung in nearly equal portions, though more leaf-mould than dung is required, for any quantity of compost. This is a near approximation to the natural soil of Roses; for the spots where they grow are those that collect the finest of the loam and the decayed vegetable and animal matters which are blown about by the winds. The habits of the Rose require differences of treatment. If its period of flowering is brief, the strength of the compost is enough for it, and more would force it too much to shoots, and weaken its flowering property; but if, on the other

One section consists of what are called perpetual Roses, and what are called demi-perpetuals, or bastard-perpetuals. These are understood to be in some respects connected with the old monthly Roses, of which some are white and some red. The true perpetuals have a terminal cluster of buds to each shoot, at whatever season those buds may be produced. Some of them, especially the crimson ones, are exquisitely beautiful and of delicious fragrance. They are mostly French—that is, bred in France; and their names are never indices to anything but the colours. They do not produce many seeds in this country; and layers of them do not answer well except on dry poor soils, which shows that they have more power of endurance upon such soils than upon richer ones. Budding and grafting, which are in substance the same operation, appear to weaken the vegetating energy of these Roses, but to strengthen their power of endurance.

The general compost, already mentioned, is the proper soil for them; but it must be enriched, and the richness kept up. In autumn the ground must be lightly but carefully forked, covered with manure, and left undisturbed till next autumn. They should be pruned twice a-year—once in November, for the general trimming; and once in June, for securing a succession of Roses. In November the beds must be dressed by digging-in the manure, and repeating it on the surface as may be necessary. At the same time the preceding summer's growth should be cut back to about one-third, and crowded branches should be thinned. In June the number of buds will, in almost every case, be greater than is desirable at that season; and as this will greatly destroy and often altogether prevent the autumnal blooming, as many of the shoots bearing buds as are thought necessary may be cut back, and in some instances the clusters may be thinned. The buds thus removed will be no disfigurement even to these Roses; for the bloom falls on the time of greatest abundance of early Roses; and therefore a number of the blooms of such plants as are to flower again are better out of the way. Besides this, if the operation is not too long delayed, the blooms which are left upon the trees are larger and finer than if the whole were there; and it is only where there is a paucity of flowers that the whole ought to remain on any one tree, especially during the early part of the season. When Roses are arranged in a bed, which is the best method with a large collection, a balance should be kept up both in the number and colour of the blooms; and when single ones are planted as standards, care should be taken that while the appearance of the plant is kept as rich as possible, the plant itself shall not be weakened, or the flowering-season abridged, one or both of which may be the result of over-flowering. As seed of these autumnal roses is obtained with difficulty, and not of much value after it is got, the heps should be removed as soon as the flowers begin to decay, and if this is done by means of a clean cut back to a joint, the subsequent flowering will be all the better.

By the time that the early flowering is over, the shoots which have been cut back will be ready to start for a new flowering; and they will do this with much vigour and no great loss of time.

Such is the method of treating one favourite section of the autumnal flowerers; but, as many of the sections differ in character, and must of course be differently treated, they will require different notices, which would occupy far too much space for a single number of the "FLORIST'S JOURNAL." The remaining sections are:—First, the Bourbon, which is an accidental or sported variety, obtained from the island after which it is named, and in which the hedges are usually formed of two rows of magnificent roses, differing in variety from each other. Secondly, the China Rose, which consists of two varieties, the common China and the Ever-flowering: both of them are very hardy roses; and are the ones that are so ornamental on the walls and around the casements of cottages. Thirdly, the Tea-scented Rose, which is also from China, and has been much used in crossing, being more fertile than most of the autumnal roses. It is among the cross progeny of this that the finest of our yellow China Roses are formed. The Noisette, the Musk, the Miniature, the Macartney, and the small leaved, are the chief remaining sections; but each section would require a separate paper, even for a mere outline.

ON FLOWER SHOWS.

BY MR. PLANT.

At the present season, whilst the all-engrossing topic with horticulturists is the Flower Shows, a few remarks on their design and tendency, together with the many modes adopted for carrying out that design, may not, perhaps, prove uninteresting. The original object, or the philosophy, as it may be called, of meetings for exhibition and comparison of individual skill, arises undoubtedly from a desire to improve by exciting to emulation ; and for this purpose better or more suitable means could not have been employed. Flower Shows were at first confined ,to exhibitions of florist's flowers alone ; but having now entered on a wider field, namely, Horticulture as well as Floriculture, a more extended range is open to them for improving the general tone of gardening wherever they are instituted ; and that their value in this respect is duly appreciated, is shown by the vast number monthly and weekly advertised throughout the kingdom—appreciated by the noblemen, gentlemen, and others who may be the founders or patrons, as evinced (generally) by their desire to increase or enrich their collections, or, what is of more consequence, the means of so enriching them, by giving their gardeners more improved plans, and more ample and efficient assistance in working out the various details connected therewith—appreciated by nurserymen and commercial gardeners, as evinced by their readiness to attend as judges, sometimes at a great loss of time, and by their willingness to contribute both as members and exhibitors ; and to them it is of much immediate advantage, as a means of giving publicity to their various productions—and last, though not least, (for on them the matter chiefly depends,) appreciated by gardeners themselves, as may be seen by the most cursory glance at any individual plant, fruit, or vegetable to be found at any exhibition throughout the kingdom, on which the utmost care, attention, and skill within the command of the gardener is lavished.

Few persons who visit a Flower Show merely as spectators are aware of the many weeks or months of untiring assiduity and care there seen in the form of some favourite plant or flower, or the intense interest entertained on its account by its cultivator, whose brightest hopes may be marred, his highest expectations frustrated, nay, his very daily bread lost, by its being passed unnoticed, it may be, for it has been, through I had almost said the caprice of some undiscerning individual who officiates as judge. Hence it appears of the utmost consequence that the committee of each and every society of the kind should use the greatest possible caution in their appointments to that onerous office ; for though, when properly conducted, nothing can tend more towards the general improvement of gardens and gardening ; yet, on the other hand, the design of the institution is lost, and its tendency warped to quite a contrary direction, by any unfair or partial awards—let them arise from what source they may ; for in that case the society immediately loses the confidence of exhibitors, and then the greatest trickster is the winner of the greatest prizes.

A very natural question arises here, Who are the most proper persons to be appointed as censors ? Nurserymen are very generally chosen at most provincial shows. Now, with the highest respect for the gentlemen who kindly take upon themselves the very difficult task of judging between rival productions of so many grades as are usually found at Flower Shows, I would submit that nurserymen or commercial gardeners are not the most proper persons to judge of private gardeners' productions, because the means employed in raising such productions should be taken into account as well as the actual qualities exhibited,—a subject on which scarce any commercial man has an idea. There cannot be a greater difference in two branches of any business than in those named. Perhaps not one nurseryman in fifty does, or ever did, grow a bunch of grapes. The same applies to vegetables, which, though classed lower, are of equal importance to general cultivators. The man who grows them for sale does not place them in a small plot of ground surrounded by a ten-feet wall and overtopped by apple and other fruit trees,—to say nothing of soil and situation. No; he chooses a fine, free, open piece of ground, where he attends to them and them only. Now, in judging, it is but natural that a person should in his mind advert to his own productions, (so differently placed,) and be thus led into an unintentional error. A nurseryman is undoubtedly a judge of plants, but he must make great allowances for the multifarious objects a gardener has to distract his attention. On the whole, I would suggest the propriety of choosing as censors for each class, persons actually engaged in that class. Thus, nurserymen should judge of nurserymen's productions, private gardeners of private gardeners', and amateurs the same; not selected from exhibitors, as is sometimes done, but appointed previously by the committee.

With respect to florist's flowers the case is different, as from very necessity the professional florist must be an efficient judge. Much more might be said on the subject, but I will conclude with one other remark. In the greater part of the lists of prizes published by Floral Societies we find the names of the members of such societies to whom such awards were made alone, while those of their gardeners are altogether left out. Now, when we consider the merely nominal prizes awarded at many provincial Shows, it seems quite an anomaly to place it to the account of the employer, and at the same time to deprive the gardener of his principal aim, namely, the honour of such award. It requires some stretch of the imagination to conceive what Lord A—— can have to do with raising cauliflowers, cucumbers, &c. or the Hon. Mrs. B—— with collections of stove and greenhouse plants. Why not place the grower's name on the list as Mr. A——, gardener to Lady B——, in the manner of the Horticultural Society of London? This may appear trivial to some, but it is of more consequence to gardeners than may be readily conceived. It entails but very little more trouble on the committee, and I feel persuaded it only requires pointing out to be adopted. And I may here mention the necessity of having all plants to which prizes are awarded, properly named, and published in the list of the Society, as that is the only information of any importance to the public generally.

R. P.

THE WEST LONDON GARDENERS' ASSOCIATION FOR MUTUAL INSTRUCTION.

January 26, 1841.

Mr. Shearer read his paper on the forcing of the Hyacinth.—In the beginning of October a few are placed in pots and glasses, preferring the single sorts for early forcing, which, if required, could be flowered at Christmas. Others are planted at the end of October, and the last succession about the middle of November. The pots upright thirty-two's, about seven inches deep and four inches wide; the soil half road-sand and half leaf-mould, with good drainage, the bulb gently pressed into the soil above the brim of the pot. They are placed on coal ashes, in any open spare part of the garden, covered eight inches with old tan or leaf-mould, as a rustiness, or canker, was produced on the young leaves and flowers by coming in contact with coal ashes. In eight or ten weeks they will generally be found in a fit state to be removed to the greenhouse, or any cold pit. From thence the most forward are removed to a house in which the temperature is kept from 60° to 65°, and placed about eighteen inches from the glass. If any showed indications of expanding their flowers before the stem was of sufficient length above the bulb, a piece of grey paper, of the desired length of the stem, was wrapped around the pot, and then placed in a cucumber frame, with the temperature from 70° to 75°. In the latter end of December, or early in January, they rise six or eight inches in about ten days; if later in the season, they advance quicker. When fully expanded, they are taken to the temperature of 60°, and finally to the greenhouse. He adopts the same practice with them when grown in glasses; first placing them in a dark room, to encourage the protrusion of roots, with a change of water once a week until they are removed into the frame or forcing-house, when a fresh supply should be given every day. The constituent elements by which plants are supported was thus explained:—That carbon is obtained by them in the form of carbonic acid gas derived from the atmosphere, generated there by the respiration of animals, and in the soil by the decay of vegetable matter; and this with its compounds is absorbed by the roots and inhaled by the leaves. When acted upon by heat and light, the carbon is retained and the oxygen evolved. Among many other observations, he remarked that the roots of plants appropriated for their own support the nutritious matter contained in the water, that the residue causes putrefaction, and generates animalcula destructive to the roots and to vegetable life. Hence the necessity of changing the water when the Hyacinths are in a rapidly-growing state. He produced on the table two fine specimens grown in glasses. In one of the glasses a table-spoonful of charcoal was mixed with the water, and in the other the same quantity of chalk (the carbonate of lime); by which experiments, repeatedly tried, he proved their efficacy in preserving the waters pure from the time they were put in the glasses until after flowering.

Mr. **Massie** agreed with Mr. Shearer that coal ashes injured the tops of the leaves. He preferred old tan, as leaf-mould was generally infested with slugs. The water he used was preserved by boiling it. He recommended the greater portion of the compost to be decomposed cow-dung for growing them in beds.

Mr. **Sherwood** was of opinion that, by boiling the water, the acid, if it contained any, would be removed.

Mr. **Guilfoyle** always covered with leaves: the compost one-half road scrapings, one-quarter cowdung, and one-quarter light loam.

Mr. **Caie** considered that the vegetable particles in water are destroyed, either by boiling, by the admixture of lime or of charcoal, or as directed by Mr. Kerman, by a small quantity of nitre to perpetuate its freshness.

Mr. **Morse** observed a difficulty in forcing the double yellows. When removed from the tan, he always covered them with loose hay, to induce them to throw up good stems. He found, in cutting the bulbs of such as did not rise well, that they were rotten. He was fearful, when the brown paper was removed, that a sudden exposure to light would injure the leaves, but in all other particulars, he approved of the essay.

Mr. **Guilfoyle** alluded to the practice adopted in Holland, where they were grown and increased in soils naturally sandy. He used cow-dung and coarse sand for flowering them in beds.

Mr. **Morse** observed that, after forcing, the bulbs were not restored to their original vigour for three years. He planted four inches deep in cow-dung and loam, and always found it difficult to produce good bulbs from offsets.

Mr. CAIE.—Deep planting was the best way to restore them to vigour. He detailed many systems which he adopted at Woburn Abbey, and believed that a gay appearance could be given to flower gardens in early spring, by planting in beds, and forming into groups of diversified colours, Scillas, Anemonies, Cyclamens, and many other bulbs invaluable for early flowering.

Mr. SHEARER never particularly noticed any difficulty in forcing the double yellows. The specimens exhibited were Daniel O'Connell and Princess Charlotte. He tried to grow them in sand and in dark places, but not with the same success as with the system he detailed.

The SECRETARY then read the following communication from Mr. Henry Bowers, gardener and forester at Laleham, near Chertsey, in answer to a request to be favoured with a detail of his system of growing Hyacinths in moss :—" I procure a quantity of sound bulbs, such as feel weighty and have a clean solid ring at bottom, then number each variety, and make a list of all, as a reference either for the curiosity of ladies and gentlemen, or for the information of the young gardener. Thus prepared, about the 20th of October, I get a quantity of the greenest moss ; if matted, it must be well separated with the hands ; also a number of clean pots of three sizes, namely, large 48's, large 32's, and flat 24's. Place an oyster-shell, or a piece of potsherd, at the bottom of each pot, and fill closely with the prepared moss, to appear like a heaped measure. Take the 48 size, and displace with the finger a little of the moss in the centre, where the bulb is carefully pressed in. As the work proceeds, rub a little white paint on the side of the pot, and with a lead pencil mark the number of the sort as per list, and one letter signifying the colour, as B for blue. Take the next size, 32, and in like manner place three bulbs at equal distances, and of three distinct colours ; next flat 24, in which four or five could be placed, the fifth to be chosen the strongest and best, placed in the middle, a little elevated in the moss, where it gives a pyramidal appearance to the whole. The pots containing three or four bulbs should be numbered on the side close to the bulbs, by which they will be distinctly known, the fifth marked with an asterisk, thus *. When all are done in this order, I give them a plentiful watering, and season advances. I always use clean water of the temperature of the house; and where there is no cistern, vessels filled with water placed in the house during the night will be fit for use next morning. When the plants are in flower, they may be placed in a variety of shapes to advantage. They can be placed in fancy baskets, as they are extremely light, and the pots easily concealed by strewing a little fresh moss over the surface,—or in the most ornamental situations, without fear of injuring the furniture,—or the pots may be taken away by turning the plant down and tapping the pot all round with the hand until the moss and roots slip out, when they could be placed in baskets, vases, or in other ornaments, without injuring the roots or breaking the moss. Place some moss round the sides to keep them steady, sprinkle the whole with clean water, and remove them to their allotted places. Having placed the baskets on large tea-trays, water to be given from a fine rose watering-pot twice a week over the flowers to refresh them, and to renew their very sweet odour."—He advised when the plants are in flower to take them out of the pots as directed, and to pick all the moss from the roots, then to pass a thread loosely round the roots, and to slip them into the glasses filled with water. When the flower guards are put on, all are complete for windows, &c. &c. the glasses to be filled with fresh water every third day.

[It gives us great pleasure to learn that the "West London Gardeners' Association for Mutual Instruction," whose Secretary,

Mr. Keane, supplied us with the above article, is advancing in its very quiet, but most useful way. Its object is to bring forward clear and simple statements of practical operations in gardening, and disquisitions on the principles upon which they depend. A great number of the best operative gardeners are members, and the opinions of all are freely stated and candidly remarked upon, with no other object in view but the advancement of the art. The Society is anxious to obtain a library for the benefit of those young members (and they are many) who are unable to purchase books for themselves; and we think it would be most praiseworthy if the more wealthy practitioners and admirers of the art were to send them a few. The last quoted donations to them are:— "Kollar on the Insects injurious to Gardeners," by Mr. Sherwood, Campden Hill; "Lee's Introduction to Botany," from Mr. Stone, gardener, Howick Hall, near Alnwick; and Mudie's "Botanic Annual," from Mr. Black, Seedsman and Florist, Bayswater.—Ed.]

TO J. M. D.

This is an operative gardener in the neighbourhood of Peterhead, so far as we can judge from the post-mark. We feel obliged to him for his good wishes, his praises of our Journal, and his announcement of the fact, that it is rapidly finding its way among the higher class in his part of the country. These matters we cannot publish; and as little can we minutely state the faults of those empirical journals and other works on Floriculture which retard instead of advancing it. It would be also somewhat foreign to our purpose to state, and by so doing adopt, the moral influence of flowers and other natural subjects, above that of "all kinds of pulpit thunder;" but we must say, that though J. M. D. is a little warm on this subject, he is quite right upon the whole; and it would be well for society that the majority of people were of the same opinion. The laying out of parks and gardens in the neighbourhood of towns, and also the decoration of cottages with borders of flowers, have most happy effects upon the whole character and conduct of the peasantry, as we have verified by our own observation. We also agree with our correspondent in thinking exotic plants the best for these cottage decorations, because the border flowers would be as it were a living book on geography. J. M. D. is anxious to stimulate cottage floriculture by small prizes, which should be books, not pecuniary rewards, and offered by the more opulent inhabitants of the vicinity. He gives a list of a few books, together with a more extended one of exotic flowers, suited for cottage decoration. For these we have no room, but, in the meantime, truth imposes on us the pleasing duty of saying that the plants especially are judiciously selected.

ON THE CULTURE OF STACHYS SPECIOSA, AND COCCINEA.

BY MR P. N. DON.

The *Stachydeæ* form the ninth tribe of the *Labiatæ.* They consist of numerous genera, sub-genera, and species, one or other of which is found in almost every part of the world, with the exception of New Holland. Many of the restricted genus Stachys are common weeds in Britain ; but Speciosa and Coccinea are natives of South America, and require the protection of a frame in winter. Their habits are rather coarse ; but their spikes of flowers, from which the generic name is derived, are truly splendid in their colours, being of so intense and brilliant a scarlet, that the eye can scarcely bear to look on them. They are highly ornamental in the greenhouse, or for beds or borders ; or, when well grown and neatly tied up, no plant suits better for ornamental vases.

They are easily grown, and will thrive in any ordinary garden mould ; but if it is rather rich they thrive better, only it must not be so very rich as to force them into overgrowth and prevent them from flowering. If grown in beds, these must be of considerable extent, as the habit is so strong that they would not look well in a small bed. Where there is space enough they are magnificent, and when planted out in the beds they should be pegged down, and only the flower spikes allowed to rise ; and as this takes place at every joint, the whole bed becomes one mass of scarlet of the most radiant intensity. They are also well suited for pots, and especially for window culture if properly treated.

Though one of the species which I have named has been many years in the country, justice has never been done to its merits; and therefore I strongly recommend the figuring of them in the "FLORIST'S JOURNAL,"—as, though no paint can do justice to the colour, this would bring them into more notice, and one might hope to see them in every flower garden and window, in the course of even next season, and they would be far more ornamental than many plants which are high priced, and difficult to flower and preserve.

In this country they are frame perennials, and the best mode of keeping and multiplying them is to strike cuttings, which is readily done in the latter part of summer, potting these in small sixties when they strike; and shifting them after a time into larger sixties, in which they should be placed in a cold frame or pit, until the danger of spring frosts is over—for they follow the same law as many plants of South and Central America, in being easily destroyed by our frosts, though they stand every other vicissitude of our variable climate. While in the pots the plants should be trained in a fan shape, as that prepares them for making a better appearance in the beds or borders. In the latter situation each shoot should be neatly tied to a short stick, the sticks about six inches apart; and then the lateral shoots will show themselves without any of that crowding which destroys the beauty of a flower garden when the flowers are collected into bunches. As window flowers they should also be trained fan-shape, and the sides of the fan should be alternately turned to the light, which, indeed, ought to be the case with all window flowers; and in order to make window flowers have a fine appearance, both from the room and from the outside, training and arrangement are very important.

S. Coccinea is a truly splendid plant, with spikes about a foot in length; the spaces between the whorls of flowers about an inch long, and six flowers in each whorl. The calyx is small and entire, with five spinescent teeth; the corolla is about an inch long, and of an intense scarlet; it is divided into two portions in the limb, but the tube is entire. The bracteæ are minute; and the basal leaves of the whorls are linear and lancet shaped toward the termination of the spike, but broader, partially cordate and broadly toothed at the bases. The stem is quadrangular and hollow; the length of the plant is from a foot and a half to two feet. It is a native of South America, and, though justice has never been done to it, it was introduced in 1798. It continues in flower from June to December.

S. Speciosa belongs to the same section as *Coccinea*. The chief difference between them is, that the spike is rather shorter and the colour not so intense as in *Coccinea*; but still this is a splendidly coloured flower; and along with some of the more intensely blue Salvias, of the same natural order, either species would form a most striking contrast in colour. Both require protection from intense frost.

P. N. DON.

THE WEATHER FOR AUGUST.

TAKEN all together, the characters of the seasons, and the successions of the weather, for the present year, are quite a study,—and one from which much instruction may be obtained on points useful to cultivators generally, but more especially to cultivators of flowers. After intensely cold, but comparatively dry weather in the end of winter and the first part of spring, drought and warmth set in, and produced a most luxuriant, though not a very early vegetation. There were during this part of the season a few reverses which affected some articles, and more especially the early blossoms and fruits of the orchard. These, however, had but little effect upon anything else, so that the flowering shrubs and herbaceous bed and border plants advanced gradually, and with that firmness which is in a great measure proof against the vicissitudes of the more advanced part of the season, and ensures a strong and vigorous bloom. Cold weather with frequent showers set in about the commencement of summer; and these were more favourable to the growth and development of flowering plants than if this part of the season had been dry, with parching days and chilling nights, which are general results of great heat in the early summer. The uniformity of temperature occasioned by the showers prevented an over-stimulus; and thus the beauties of the parterre advanced onwards with much steadiness,—surer than in more stimulating seasons, but, at the same time, slower.

It is probable that this diminished heat of the summer may have thrown our native wild flowers more into growth of the individual, and less into flowering growth, than if the character of the season had been different; but in wild plants it is the leaf which we value more than the flower; and, therefore, we should say that the season was peculiarly favourable for the down and the upland, and that there was never so much stagnant moisture upon the very lowest meadows, if at all kept in decent order, as to sour the vegetation there, or change its character from meadow to marsh, as is but too often the case upon slovenly managed grounds in wet seasons. The showers alternated with brisk winds, so that much of the rain which fell passed off in vapour, and so, notwithstanding the frequent rains, the atmosphere was, upon the whole, dry and healthy. The same circumstances which were favourable to the pastures were equally so to the crops on the cultivated fields; and thus the cerealia, the legumes, the bulbs, the tubers, and those parts of plants which answer for culinary purposes, have all been brought forward in great abundance and of the finest quality. It is true that in so varied a country as Britain there is no kind of weather equally favourable to all the species of wild and cultivated plants; and hence the crops upon strong and retentive clays may be lodged and damaged; and those of some places may be injured by smut, rust, and other small fungi which rainy weather calls into action; but whatever may be the result, the circumstances have been highly favourable to the average of lands; and we should say that such a season is highly useful in pointing out to the cultivator what lands he should plough, and what leave in natural pasture. It may be proper to observe, that though showers have been frequent, they have been waterings, not drenchings; and that in the rainy districts, the rain which has fallen has been much below the average.

The Flower Garden is in some respects a miniature of the farm, only the operations of the gardener are more nice and varied than those of the farmer. Still the results which both aim at are similar, and therefore the occupations may be made mutually to illustrate each other. The ultimate aim of the farmer is to obtain farinaceous seeds, and tubers, and bulbs in the greatest quantity and perfection; and the ultimate aim of the florist is to obtain flowers with the largest, most perfectly-formed, and most beautifully-coloured petals; so that, waiving the differences of the vegetables upon which they operate, the chief difference between them is, that the florist stops short of that stage which the farmer looks forward to; but if the obtaining of seedlings is the object, the florist carries forward his operations just as far as the other.

The greater part of our flowers, even bed and border flowers, which are the ones most dependent on the vicissitudes of the weather, are natives of countries whose climates are different from ours; and though they in time become to a considerable extent acclimated with us, they still retain the natural adaptation to their own climate. Now, almost every country from which flowering plants are imported has a more seasonal climate than we have. After the dormant time of the plant there is usually a pretty strong stimulus of heat, light, and moisture to start it into action; and then the weather between the start and the flowering is such as not to oversearch or overwork the plant. Thus, when it comes to flower it is in high vigour as a plant, and in excellent condition for flowering. This is the best state both for the flowers and the plant; for if the plant is either overstarved or overgrown in the wood or stem, it never flowers well; and if nature or art works for an excessive flowering, the individual growth of the plant is always weakened, and may be so much weakened as to die off and be unable to rally during the next season. The present year has, we think, been an average in this way. For this reason we beg of florists to watch its effects; and we, convinced of the importance of the subject, shall offer a few more remarks on it next month.

CALENDAR FOR SEPTEMBER.

As the busy season of repotting is now fast approaching, it may not be amiss to remind cultivators of the necessity of a strict attention to drainage, the importance of which is now pretty generally acknowledged; and to secure this, besides a sufficiency of sherds in the bottom of each pot, the various soils should be used as rough as is consistent with the natural habits of each particular plant: and, in addition, it appears that a great improvement might be effected in the manufacture of the pots. As they are now made, a great impediment is offered to the proper filtering of the water through the bottom of the pot by a suction caused by the water when the pot is placed on any flat surface. This may be remedied by having a rim round the bottom of the pot of depth and strength proportionate to the size of the pot, and this rim to be divided into three or more segments. Thus the pot would stand on legs, as it were, leaving a cavity for the proper escape of water. It would be no hindrance to packing and but little extra expense; and, if required, the pot-makers would soon produce them with as much readiness as in their present form.

STOVE.—Let all repairs be completed immediately. Thoroughly cleanse all parts of the house, and repot all plants that require it, observing the previous directions for drainage; prune back climbing plants, and renew the earth about their roots. In potting healthy plants the same kind of soil should be continued; but if any look sickly, it should be altered as circumstances may seem to require. The shifting here should be concluded as soon as possible, so as not to interfere with that of the next department. Finish drying off Cape bulbs, &c. If the weather continues warm, a free supply of air may still be given, though cold nights must be guarded against.

GREENHOUSE.—The repotting here should commence as soon as that required for the stove is finished, beginning with those which have stood all summer in the house. Use the knife freely on all free-growing or ill-shaped specimens. In lifting greenhouse plants that have been planted in the open border, care should be taken to preserve as many of the smaller roots entire as possible. Lifting is in some cases an indispensable matter, yet, on the whole, it is open to many objections, so that it is preferable to propagate from such plants than to depend on them when repotted: of course this only applies to common free-growing plants. Dry off Gloxinias, Tropeolums, Erythrinas, and other summer flowering bulbous-rooted plants. Chrysanthemums may be brought in towards the end of the month: give a plentiful supply of air and water.

FLOWER GARDEN.—Dahlias require much attention to preserve them from heavy winds and insects. The lateral shoots should be tied to separate stakes, so as to keep the plant open. Pot roots may be dried off. Take off layers of Carnations, Picottees, &c.; pot them in small forty-eight sized pots, two plants in each pot. At the end of the month Auriculas may be placed in their winter quarters; water them gently as often as required. The winter stock of Pansies should now be potted; let the pots be as small as possible. Hyacinths, Tulips, and other Bulbs for forcing should be potted and plunged into a bed of old tan or ashes out of doors. Prepare Tulips for planting; let the ground intended for them be got into good order. Plant out Pinks and all biennials, and sow the seed of the same.

FLORICULTURAL INTELLIGENCE.

June 10. WINGHAM FLOWER SHOW.

Geraniums, 3 best...1. Fosterii Rosea, Sylph, Matilda; Rev. C. Bayley. 2. Garth, Perfection, Beauty of Ware, Climax; Rev. C. Bayley.

Ditto, 1 best...Foster's Alicia, Denne Denne, Esq.

Best 3 American Plants...Kalmia latifolia, Kalmia lucida, Azalea glauca; Denne Denne, Esq.

Best 3 Calceolarias Herbaceous...Magniflora, Alba-purpurea, Lady Antrobus; Rev. J. G. Hodgson.

Best 3 Ditto Shrubby...Gem, Arborea picta, Victoria; J. Godfrey, Esq.

Best 3 Annuals...Schizanthus retusus, Schizanthus venustus, Phlox Drummondii; Mrs. Papillon.

Best 3 Cacti...Ackermannii Major, Speciosus, Speciosissimus; J. Godfrey, Esq.

Best Cactus...Speciosissimus, Mrs. Gregory.

Best Fuchsia...1. F. Fulgens, Mr. Sankey; 2. F. Chandlerii, Mrs. Gregory.

Best 3 Ericas...E. umbellata, E. linea nova, E. stellata; Mr. Keeler.

Best Azalea...A. Sinensis, Denne Denne, Esq.

Best 3 Greenhouse Plants...1. Melaleuca fulgens, Pimelia decussata, Drosera odoratissima, J. Godfrey, Esq. 2. Boronia serrulata, Helichrysum spectabile, Sollya heterophylla, Mr. Sankey.

Best 1 Ditto...Hoya Carnosa, J. P. Plumptre, Esq. M.P.

CUT FLOWERS.

Best 6 Roses...1. Queen of Bourbons, Crimson perpetual, Damask Moss, Prolific Moss, Petit Pierre, Boursault gracilis; Lady Bridges. 2. Leda, Mignonne, Jaune d'esprit, Afleur de nerium, Victorieuse Luxembourg, Triumphante damask; J. Godfrey, Esq.

Best 12 Ranunculuses...Mr. Juillion.

Best 3 Red Stocks...Brompton, R. Brooke, Esq.

Best 6 German ditto...Mr. Sankey.

Best 12 Pansies...1. Imogene, Victory, Jewess, Aurora, Dr. Johnson, Eclipse, Robin Adair, Cream Superb, Peter Dick, Highgate Champion, Westminster Abbey, Beauty of Hitchin; Rev. J. G. Hodgson. 2. Victory, Queen of the Isle, Eliza, Page's Wellington, Sylph, Carlo Dolci, Duchess of Richmond, Iago, Cream Superb, Jewess, Lane's Wellington, Miss Sebright; Rev. J. G. Hodgson.

Best 6 Geraniums...Conservative, King, Alexandrina, Joan of Arc, Sidonia, Erechum; Rev. C. Bayley.

Best 6 Iris...Mr. Juillion.

Bouquet of Greenhouse Flowers...J. P. Plumptre, Esq. M.P.

Bouquet of Hardy Flowers...Lady Bridges.

Best Floral Device...Fountain, Mr. H. Branford. 2d ditto...Windmill, Mr. G. Denne.

Fruits and Flowers numerous.

June 24. HINCKLEY HORTICULTURAL AND FLORAL SOCIETY. An Exhibition of all kinds of horticultural and floral productions was opened by this Society at the Town Hall, by permission of the feoffees. A manifest improvement has been effected by the new arrangements entered into at the last general meeting. From the late genial rains the specimens of every kind were very excellent. There was plenty of flowers, "sweet flowers," to attract the ladies—plenty of vegetables to interest the sturdiest growers—and plenty of fruits to make all their mouths water together. The cottagers' department was much better supplied than usual, realising in some measure the anxious hope of the Committee, as expressed in their last year's report—that "of diffusing a taste for horticultural pursuits amongst the humbler classes." The Pansies by Miss Alkin, of Hartshill, were finely grown and of very beautiful kinds. F. Dansey, Esq. expressed his warm approbation of the cottagers' table, and Mrs. Dansey presented them with a liberal donation, as did also W. Milhouse, Esq. of Barwell House. The company was very numerous, and seemed highly pleased with the necessary good effects of such a Society. The following prizes were awarded:—

ROSES.

First 3, Rev. J. Woods; second 3, Mr. J. M'Ewan; third 3, Mr. G. Ward.

Best Single Bloom...(Coup d'Amour) Mr. G. Ward.

Extra Prize, given by Mr. Cole, of Rugby, for twelve Roses of not less than 6 sorts... Mr. G. Ward.

PINKS.

First Pan of 6 Varieties, containing Elizabeth, George the Fourth, Lady Haggerstone, Duke of St. Alban's, Westlake's Hero, one Unknown.

Second Pan of 6...Mr. D. Ward.

Pans of 3 Varieties...1. Mr. D. Ward; 2. Mr. G. Ward.

Pansies (12 varieties)...1. Mr. T. Taylor; 2. ditto, Mr. T. C. Harris. Pansies (6 varieties)...1. Miss Alkin, Hartshill; 2. ditto, Mr. T. Taylor.

CUT FLOWERS.

First Bouquet...Mrs. W. M'Ewan; second ditto, Mrs. Ward, Port House; third ditto, Miss Shipman; extra ditto, Mrs. Argent.

HOUSE AND GREENHOUSE.

1. Fuchsia Fulgens, R. S. J. Winterton, Esq.; 2. Cactus Jenkinsonia, Mr. H. M. Ward; 3. Calceolaria, Mr. J. M'Ewan; 4. Cactus Akermannia, ditto.

Geranium...1. Mrs. W. M'Ewan; 2. Mrs. G. Ward.

COTTAGERS' DEPARTMENT.

Cut Flowers...1. John Lee; 2. T. Battison; 3. John Truslove.

House Plants...1. and 2. John Lee.

July 7. LEICESTERSHIRE FLORAL AND HORTICULTURAL SOCIETY. The second Exhibition this season for Pinks, Roses, &c. took place at the Exchange Rooms. Mr. G. Hudson's two Seedling Pinks of last year, the Duke and Duchess of Devonshire, again justified the high character given them, and when more generally distributed, cannot fail to be leading favourites. The awards of the Judges were as under:—

First Pan of 6 Pinks...Mr. R. Marris, with Faulkner's Duke of St. Alban's, Greasley's Beauty of Leicester, Bow's Suwarrow, Bossom's Elizabeth, Hudson's Duchess of Devonshire, and Marris's Lady of the Lake.

Second Pan...Mr. G. Hudson, with Faulkner's Duke of St. Alban's, Hudson's Duke of Devonshire, Seedling Red Laced, Criterion, Westlake's Hero, and Hudson's Duchess of Devonshire.

Third Pan...Mr. G. Hudson, with Faulkner's Duke of St. Alban's, Bradshaw's Greenside, Criterion, Seedling Red Laced, Westlake's Hero, and Seedling Black and White.

PINKS.—SECOND CLASS.

First Pan of 3...Mr. R. Marris, with Faulkner's Duke of St. Alban's, Holmes's Coronation, and Marris's Lady of the Lake.

Second Pan...Mr. G. Hudson, with Lord Milton, Seedling Purple Laced, and Hudson's Magnificent.

CLASSES.

Purple Laced...1. Hudson's Duke of Devonshire, Mr. G. Hudson; 2. Bow's Suwarrow, Mr. R. Marris; 3. Hudson's Albion, Mr. G. Hudson; 4. Faulkner's Duke of St. Alban's, Mr. J. Coleman; 5. Faulkner's Dreadnought, Mr. R. Marris; 6. Seedling, Mr. W. Musson; 7. Faulkner's Perfection, Mr. R. Marris; 8. Hudson's Little Benjamin, Mr. G. Hudson.

Red Laced...1. Criterion, Mr. J. Coleman; 2. Seedling, Mr. G. Hudson; 3. Seedling, Mr. W. Musson; 4. ditto, ditto; 5. Admiral Codrington, Mr. J. Coleman; 6. Bossom's Elizabeth, ditto; 7. Marris's Emma Louisa; 8. Rosabel, Mr. G. Hudson.

Black and White, or Plain...1. Parry's Union, Mr. R. Marris; 2. Seedling, Mr. W. Musson; 3. Seedling, Mr. R. Marris; 4. Westlake's Hero, Mr. R. Harris, jun.; 5. Marris's Lady of the Lake, Mr. R. Marris; 6. Seedling, ditto; 7. Hudson's Duchess of Devonshire, Mr. G. Hudson; 8. Snowball, Mr. R. Harris, jun.

ROSES.

First, or Nurserymen's Class...Best Pan of 12, Mr. G. Walker, Humberstone-road.

Second, or Gentlemen's Gardener's Class...First Pan of 9,—Bent, from the garden of J. Biggs, Esq.; Second, ditto, ditto.

Third, or Amateurs' Class...Best Pan of 6, Mr. W. Musson.

CLASSES.

Dark or Purple...1. Mr. J. Smalley; 2. Mr. W. Kelley; 3. Mr. G. Hudson.

Moss...1. Rev. S. Wigg; 2. Mr. Herbert; 3. Mr. W. Kelley.

Crimson or Scarlet...1. Mr. W. Kelley; 2. ditto; 3. Mr. W. Musson.

Mottled or Striped...1. Mr. J. Smalley; 2. Mr. Herbert; 3. ditto.

White or Blush White...1. Mr. W. Kelley; 2. Mr. Herbert; 3. ditto. First 12 Pansies, Mr. J. Coleman. First 6 ditto, ditto. Best 12 Hardy Flowers, Mr. G. Walker.

Best 6 Stove Plants...Mr. J. Mott, Statice Arborea, Roella Formosa, Ficus Elastica, Acrostychum Alcicorne, Streptocarpus Rhexii, and Burchia Dentata.

Best 6 Greenhouse Plants...Pimelia Decussata, Calceolaria Punctata, Erica Hibberdia, Fuchsia Fulgens, Ditto Globosa, and Hydrangea Communis, Sir F. G. Fowke, Bart. (Tester, gardener.)

Second Ditto...Fuchsia Fulgens and Globosa, Heliotropium Fulgens, Pentstemon Gentianoides, Loaza Aurantiaca, and Calceolaria Grandissima, George Shaw, Esq. M.D. (T. Christian, gardener.)

Balsams (Extra Prize)...Sir F. G. Fowke, Bart. (Tester, gardener.)

Best 6 Geraniums...Coronation, Nosegay, Lady Carlisle, Maid of Athens, Garth's Perfection, and Alexandrina, J. Philips, Esq. (T. Christian, gardener.)

Second ditto...Prima Donna, Belladonna, Vivid, Lord Auckland, Alicia, and Splendissima, J. Philips, Esq. (T. Christian, gardener.)

Ranunculuses...First pan, Mr. W. Musson; second ditto, Mr. J. Smalley; third ditto, Mr. W. Musson.

Non-Subscribers...Geraniums from Mrs. Goodwin, Pinglc; Pinks from Messrs. Greasley and Co., Abbey-gate; and a miscellaneous collection from Mr. J. Cartwright, Oadby.

July 9. AYRSHIRE HORTICULTURAL AND AGRICULTURAL SOCIETY.—The second exhibition of this Society, for the season, took place in the large room of the Ayr Arms Inn. Amongst the more attractive displays was a collection of Roses from Rozelle, embracing a number of hybrids between the China and garden species, which were greatly admired, as somewhat rare at this period of the year. A basket, or rather a pyramid, of flowers, neatly arranged in moss, and consisting of upwards of 300 varieties, from Belleisle, attracted general attention. A large and very beautiful plant of Fuchsia fulgens, and a splendid specimen of Fuchsia globosa, also from Belleisle, presented a distinguished appearance. Amongst the fruits, some excellent Strawberries were shown from Rozelle, and the gardens of Mr. Imrie, seedsman. The Melons were also very excellent specimens of what can be grown in our northern climate. The judges, Mr. Young, gardener, Holmes; Mr. Rentoul, gardener, Coilsfield; Mr. Kay, Kilmarnock; Mr. J. Smith, and Bailie Wm. Smith, Prestwick, awarded the prizes as follows:—

PLANTS AND FLOWERS.

Greenhouse Plants, best 7...1. Mr. Hunter, gardener, Belleisle, for Erica Bowieana, Erica ventricosa var., Erica carnea, Lechenaultia formosa, Pimelia decussata, Statice puberula, and Erythrina laurifolia. 2. Mr. Kirkland, gardener to Mrs. M'Taggart, Ayr. 3. Mr. Locke, gardener, Rozelle.

Heaths, best 3...Mr. Locke.

Best Greenhouse Plant...Mr. Kirkland, Erica ventricosa.

Pinks...1. Mr. Locke, for Robert Bruce, Smith's Earl Grey, Lady of the Lake, Suwarrow, Cook's Seedling, Clorinda, Paul Pry, Florentine, Frazer's Maid of Erne, Rose Diana, Comet, Limond's Napoleon, and Mary Queen of Scots. 2. Mr. M'Bride, Content. 3. Mr. Kirkland.

Double Sweet Williams...Miss Henderson, Thornhill.

Calceolarias...1. Mr. Hunter, for Atticus, Gem, and Hero. 2. Mr. Locke.

Pansies, best 7, 4 competitors...1. Mr. Hunter. 2. Mr. Locke. 3. Mr. Pattison, gardener, Catrine Bank.

Ditto, best 13...1. Mr. Hunter, for Lord Douglas, Lady Douglas, Good Sir James, Ariosto, Sela, Lavinia, Carlo Dolci, Rival Doctor, Amanda, Miss H. Neill, Belzoni, Queen Bess, and Vesta. 2. Mr. Locke.

Roses...1. Mr. Locke, for Franklin, Violette Picottee, Hybrid fulgens, Hybrid unique, Hybrid Becquet, Celestine, Reine des Hybrids, Bouquet charmante, La Muskowa, Maid of the Valley, Rose de Roi, Seven Sisters, and Gallica. 2. Mr. D. Hunter.

Ditto China...1. Mr. Hunter. 2. Mr. Locke. 3. Mr. D. Hunter.

Ditto, collection...Mr. Locke.

Collection of Herbaceous Flowers...Mr. Locke, this contained 90 species.

Ditto of Flowers of any sort...Mr. Hunter.

Double Stocks, 4 competitors...1. Mr. Kirkland. 2. Mr. Hunter. 3. Mr. Thomas Service, gardener, Fairfield Lodge.

Verbenas, collection...Mr. Hunter.

Calceolaria, Seedling...Mr. Locke.

Scarlet Pelargoniums...1. Mr. Hunter. 2. Mr. Locke.

Petunias...Mr. Hunter.

Salvia patens...Mr. Locke.

Fuchsia fulgens...Mr. Hunter.
Fuchsias, best 3...Mr. Hunter, for Edmistone Seedling, Globosa major, and Globosa splendida.
Herbaceous Plants, best 13, 4 competitors...1. Mr. Hunter, for Delphinium Barlowi, Pentstemon gentianoides, Pentstemon gentianoides coccinea, Alstrœmeria aurea, Pentstemon digitalis, Campanula garganica, Spiræa japonica, &c. 2. Mr. Locke. 3. Mr. Kirkland.
Pelargoniums...Mr. Locke, for Jewess, Climax, Lounde's Perfection, Alexandrina, Helen of Troy, and Alicia.

Amongst the show articles the following were particularly good:—A beautiful Tropæolum peregrinum, several Pelargoniums, Fuchsias, fine Balsams, Calceolarias, Roses, and Herbaceous Plants, from the garden of Mrs. M'Taggart, Ayr; a number of very fine plants, amongst which were Amaryllis Johnsonii, Erica ventricosa prægnans, E. ventricosa erecta, E. stylosa, Campanula Barrelieri, and two Crassula coccinea, from Corsehill-garden; a plant of Rhodochiton volubile, trained in a horizontal circle, which attracted much attention; a trained Maurandya Barclayana, Erica Bowieana, Sollya heterophylla, Boronia serrulata, Lechenaultia formosa, Roella ciliata, and several others equally fine, from the garden of Mrs. M. Hamilton, Ayr; eight fine Melons, three clusters of Grapes, and several beautiful Plants from Belleisle; a large and beautiful collection of Cut Flowers, containing 100 sorts of Herbaceous Plants, 30 of Pelargoniums, &c.; several excellent Plants, as Fuchsia Standishii, F. fulgens, F. multiflora, F. erecta, &c.

Medals offered by individual members of the Society were gained as follows:—

Stocks, best 6...Mr. Kirkland.
Roses, ditto...Mr. Hunter.
Salvia patens...Mr. Hunter.
Fuchsia fulgens...Mr. Kirkland.
Verbena...Mr. Hunter, for Hendersonii.
Rare Plants, best 3...Mr. Hunter, for Campanula garganica alba, Pentstemon speciosus, and Stachys coccinea.
Best grown Plant...Mr. Hunter, for Fuchsia fulgens.

Medals were awarded by the Society to Mr. Hunter, for Greenhouse Plants, the 7 best Pansies, and for Cherries; to Mr. Locke, for Roses and Pinks; to Mr. Kirkland, for Stocks.

July 13. ELHAM HORTICULTURAL AND FLORAL SOCIETY.—The exhibition of this Society was held on Tuesday, July 13, when the prizes were awarded as follows:—

PLANTS IN POTS.

Best 3 Heaths...1. Mr. Land. 2. Mr. Keeler.
Best 3 Fuchsias...1. Mr. Acombs, gardener to the Archdeacon Croft. 2. Mrs. Papillon.
Best ditto...Rev. W. Brockman.
Best 6 Geraniums...Mr. Acombs.
Best 3 ditto...1. Mrs. Papillon. 2. Mr. Land.
Best 3 Balsams...Mr. Land.
Best 3 Cockscombs...Rev. W. Brockman.
Best 3 Perennials...Mr. Keeler.
Best 3 Annuals...Mrs. Papillon.
Best Climbing Plant...Mr. Keeler.
Best 3 Petunias...Mr. Forth.
Best Rose...Rev. W. Brockman.
Best Cactus...Mr. Acombs.
Best 3 Calceolarias...Rev. W. Brockman.
Best 3 Greenhouse Plants...Mr. Land.

CUT FLOWERS.

Best 6 Roses...1 and 2. G. C. Oxenden, Esq.
Best 12 Heartsease...1. Mr. Keeler. 2. Mr. Quested.
Best 6 Stocks...Rev. W. Brockman.
Best 12 Perennials...Mr. Acombs.
Best 12 Annuals...Mr. Acombs.
Best Bouquet...Mr. Acombs.
Best 25 Indigenous Plants...Mr. Keeler.
Best Floral Device...Mr. Land.

July 15. CRIEFF HORTICULTURAL SOCIETY.—The first meeting of this Society for competition in flowers was held in the Mason Lodge. The display was rich and imposing. The Pelargoniums, Pinks, Roses, Calceolarias, Pansies, and Stocks, were beautiful and select. The bouquets that graced the centre and ends of the upper part of the room, at once caught the eye and rivetted, for a time, the gaze of every visitor.

The prizes were awarded as follows:—

PLANTS AND FLOWERS.

Pelargoniums, best 6...1. Mr. Campbell, Ardoch House, and Mr. Naughton, Dalhouzie, equal. 2. Mr. M'Donald, Drummond Castle. 3. Mr. Anderson, Milnearn.

Seedling...1. Mr. Campbell. 2. Mr. Anderson.

Pinks, best 6...1. Mr. M'Donald. 2. Mr. M'Lean, Auchterarder House. 3. Mr. Campbell.

Best 3 ditto...1. Mr. M'Donald. 2. Mr. M'Gregor, Lawers.

Seedling, best...Mr. Campbell.

Stocks, 10 weeks, best 3...1. Mr. M'Donald. 2. Mr. M'Naughton. 3. Mr. M'Gregor.

Any other sort, best 3 flowers...Mr. Campbell.

Bouquet of Flowers, the most tastefully put up...1. Mr. M'Donald. 2. Mr. M'Naughton. 3. Mr. M'Gregor.

Roses, best 6, different...1. Mr. Gorrie, Clathick. 2. Mr. M'Donald.

Double Ayrshire, best 3...1. Mr. Campbell. 2. Mr. M'Laren, Dunira.

China Roses, best 3...1. Mr. M'Donald. 2. Mr. Campbell.

Dahlia, double, best 6...1. Mr. M'Laren. 2. Mr. Campbell. 3. M. M'Donald.

Hardy Biennial and Perennial Herbaceous Plants, best 6...1. Mr. M'Naughton. 2. Mr. Campbell. 3. Mr. Anderson.

Iris, bulbous, best 3...1. Mr. Campbell. 2. Mr. Anderson.

Calceolaria, best 4 varieties...1. Mr. M'Gregor. 2. Mr. M'Donald.

Gladiolus, best 3 varieties...Mr. Anderson.

Greenhouse or Frame Shrubby Plants, in pots, best 3...1. Mr. M'Donald. 2. Mr. M'Laren. 3. Mr. Anderson.

Greenhouse or Frame Herbaceous Plants, cut specimens, best 3...1. Mr. M'Donald. 2. Mr. Campbell.

Violets, best 6, different...1. Mr. M'Donald. 2. Mr. M'Lean. 3. Mr. M'Laren.

Seedling, best 6, different...1. Mr. M'Donald. 2. Mr. Inglis, Strowan.

Besides the articles brought forward for competition, we observed the following:—From Mr. M'Donald, Drummond Castle, some fine Cockscombs, very fine German Ten-week Stocks, and a collection of splendid Greenhouse Plants. From Mr. M'Lean, Auchterarder House, 50 varieties of Pinks, 5 double seedling Sweet Williams, 2 varieties of Strawberries, &c. From Mr. M'Naughton, Dalhouzie, 2 Fuchsia Globosa, Fuchsia Ricartonii, Fuchsia Brewsteri, 2 Salvia Patens, Pelargonium, Loudon's Perfection, 2 Mesembryanthemums, Cactus Ackermanni, &c. From Mr. Campbell, Ardoch House, a fine collection of Pelargoniums, one of which was a seedling much admired. From Dunira, a beautiful collection of Cactuses, Pelargoniums, Fuchsias, and Dahlias.

July 16. VALE OF EVESHAM HORTICULTURAL AND FLORAL SOCIETY.—The fourth Show of this Society took place on Friday, the 16th of July, when the following prizes were awarded:—

CARNATIONS.

Scarlet Bizarres...1. Willmer's Conquering Hero, Mr. Holmes. 2. Walmsley's William IV., W. Barnes, Esq. 3. Fletcher's Duke of Devonshire, Mr. Holmes.

Crimson Bizarres...1. Holmes's Count Palini, Mr. Holmes. 2. Holmes's Criterion, ditto. 3. Gregory's King Alfred, W. Barnes, Esq.

Scarlet Flakes...1. Seedling, Mr. Holmes. 2. Holmes's Lady Lennox, ditto. 3. Gummery's Brilliant, ditto.

Purple Flakes...1. British Queen, Mr. Holmes. 2. Seedling, W. Barnes, Esq. 3. Unknown, S. Hunter, Esq.

Rose Flakes...1. Ely's Lovely Ann, Mr. Holmes. 2. Smith's Coronation, ditto. 3. Pullen's Duchess of Gloucester, ditto.

PICOTTEES.

Red...1. Wood's Marshal Soult, Mr. Holmes. 2. Unknown, S. Hunter, Esq. 3. Seedling, W. Barnes, Esq.

Purple...1. Toones's Maria, Mr. Holmes. 2. Clark's Superior, ditto.
Bouquet of Flowers...Mr. Clarke.
Pansies...W. Barnes, Esq.
Dahlias...1. Suffolk Hero. 2. Marquis of Lothian. 3. Springfield Rival. 4. Lady Fordwich. 5. Countess of Liverpool. 6. Earl Grey; Mr. Clarke.
Stove or Greenhouse Plants...1. Acrostichum Alcicorne. 2. Erica Reflexa. 3. Gesnera Cooperii; Mr. Clarke.
Cockscomb...R. Ashwin, Esq.
Hardy Annuals...Mr. Clarke.
Perennials...Rev. J. Harling.

COTTAGERS' PRIZES.

Roses and Larkspurs...John Sheppy.

EXTRA PRIZES.

Kalasanthes Coccinea...Edward Rudge, Esq.

July 19. Uxbridge Horticultural and Floricultural Society.—The Carnation Show of this Society was held at the King's Arms Inn, Uxbridge. The show was small, but the flowers were of the best quality. Prizes awarded:—

1. Mr. Willmer, Sunbury, for Hale's Prince Albert, Wood's William the Fourth, Brooks's Flora's Garland, Cartwright's Rainbow, Willmer's Solander, Willmer's Hero of Middlesex, Strong's Duke of York, Willmer's Bishop of London, Ely's Earl of Mexborough, Ely's Lady Ewby, Paugh's Lady of the Lake, Wallace's Beauty of Bradley. 2. Mr. Alloway, Sonning, names not given. 3. Mr. Weeden, Hillingdon, for Smith's Marquis of Chandos, Strong's Duke of York, Holmes's Comtesse Pauline, Lovegrove's Louisa, Willmer's Conquering Hero, Willmer's Endymion, Young's Earl Grey, Hogg's Lady Stanley, Willmer's Bompland, Willmer's Cambyses, Fry's Leonidas, Fletcher's Lord Anson. 4. Mr. Thunber, Southall, for Strong's King, Smith's Marquis of Chandos, Fry's Leonidas, Willmer's George the Fourth, Norman's Mrs. Smith, Strong's Laincour, Earl Grey, Willmer's Conquering Hero, Sir George Crewe, Sir Robert Peel, Thunber's Earl of Eldon, Lord Byron. 5. Mr. King, Iver, for Willmer's Duke of Sussex, Willmer's Conquering Hero, Caroline, Telemachus, Lady Howe, Bompland, Duchess of Kent, Strong's King, Paul Pry, Willmer's Versicolor, and one unknown.

Two Seedlings were exhibited...1. Mr. Attwell. 2. Mr. Willmer—neither of which elicited much attention.

July 20. Worcester Horticultural Society.—The last Show but one of this season took place on Tuesday, July 20. List of prizes:—

CARNATIONS.

Stands of 6 Blooms...1. Mr. Holmes. 2. Mr. Biddell. 3. Mr. Brown.
Scarlet Bizarre...1. Wilde's Standard of Perfection, Mr. Brown. 2. Hepworth's Leader, Mr. Holmes. 3. Earl of Mexborough, Mr. Biddell. 4. Aston's Shakspere, Mr. Brown.
Crimson Bizarre...1. Holmes's Count Palini, Mr. Burlingham, 2. Biddell's Lucretia, Mr. Brown. 3. Lord Byron, Mr. Brown. 4. Paul Pry, Mr. Brown.
Scarlet Flake...1. Brown's Freedom, Mr. Brown. 2. Wood's Comet, Mr. Jauncey. 3. Jauncey's Mrs. Berkeley, Mr. Jauncey. 4. Gummery's Brilliant, Mr. Biddell.
Purple Flake...1. Holmes's Mary Ann, Mr. Biddell. 2. Jauncey's Dr. Taylor, Mr. Jauncey. 3. British Queen, Mrs. Brown. 4. Jauncey's Duchess of Wellington, Mr. Jauncey.
Rose Flake...1. Pullen's Duchess of Gloucester, Mr. Brown. 2. Ely's Lovely Ann, Mr. Holmes. 3. Malpas's Lady Grey, Mr. Holmes. 4. Brooks's Flora's Garden, Mr. Biddell.

PICOTTEES.

Stands of 6 Blooms...1. Mr. Biddell. 2. Mr. Holmes.
Single Blooms, Red...1. Marshal Soult, Mr. Holmes. 2. Lord Sondes, Mr. Brown. 3. Lord Deerhurst, Mr. Brown.
Purple...1. Pullen's Lady Peel, Mr. Biddell. 2. Gibbon's William IV., Mr. Biddell.
Collections...1. Mr. Smith. 2. Mr. Burlingham.
Balsams...1. Mrs. Morton. 2. Mrs. Morton.
Stove Plants...1. Gloxinia Rubra, Mr. Smith. 2. Bilbergia Grandiflora, Earl Coventry.
Greenhouse Plants...1. Crowea Saligna, Mr. R. Smith. 2. Helichrysum Fulgidum, Rev. G. Woodcock. 3. Lilium Longiflorum, Mr. Smith.
Geraniums...1. Mr. Burlingham. 2. Mr. Burlingham.
Cape Heaths...1. Erica Radiata, Mr. Smith. 2. E. Mutabilis, Mr. R. Smith. 3. Mr. Smith.
Nosegay...Mr. Keeley.
Hardy Annuals...1. Phlox Drummondii, Rev. G. Woodcock. 2. Clintonia Pulchella, Rev. G. Woodcock.
Dahlias...1. Marquis of Lothian, Mr. R. Francis. 2. Egyptian King, Mr. R. Francis. 3. Ansell's Unique, Mr. T. Hooke, jun. 4. Lewisham Rival, Mr. Stanton. 5. Lady Ford-

wich, Earl Coventry. 6. Miss Johnson, Mr. Cook. 7. Springfield Rival, Earl Coventry. 8. Hope, Earl Coventry. 1. Kate Nickleby, Mr. Cook. 10. Unknown, Mr. Jauncey. 11. Sykes's Diana, Rev. G. Woodcock. 12. Unknown, Earl Coventry.

July 20. Caledonian Horticutural Society.—The second Competition Meeting of the Season was held at the Experimental Gardens, Inverleith. The display of Plants was extensive and brilliant. The prizes were awarded as follows:—

Shrubby Exotics...1. Mr. John Addison, gardener to the Earl of Wemyss, Gosford, for Clematis Bicolor, Epacris Grandiflora, Statice Arborea, and Erica Viridiflora. 2. Mr. John Young, gardener to Thomas Oliver, Esq., Newington Lodge, for Helichrysum Proliferum, Statice Arborea, Clematis Bicolor, and Pimelea Decussata.

Finest kinds of Fuchsia, exclusive of varieties of F. Fulgens, Mr. John Downie, gardener to General Robertson, Canaan Bank, for F. Virgata and F. Globosa.

Hybrid varieties of Fuchsia Fulgens...1. Mr. Peter Thomson, gardener to Lord Advocate Rutherfurd, at Craigiehall, for two Seedlings of great beauty. 2. Mr. Young, Newington Lodge, for F. Standishii and F. Greyiana.

Tropical Orchideous Plants...1. Mr. George Stirling, gardener to Lord Melville, Melville Castle, for Miltonia Spectabilis and Cattleya Forbesii. 2. Mr. Robert Middleton, gardener to Dr. Neill, for Oncidium Pulvinatum and O. Pumilum.

In Cape Heaths there were seven competitors, each producing four species, and the plants were of the most beautiful description. Three awards were made...1. Mr. John Gow, gardener to Count Flahault, for Erica Spuria, Comosa Alba, Jasminiflora, and Ventricosa. 2. Mr. David Fowlis, gardener to Mr. Blair, for E. Ventricosa, Alba, Ventricosa Superba, Tricolor, and Metulæflora. 3. Mr. Stirling, for E. Prægnans, Ventricosa, Shannoniana, and Comosa Alba.

For American Verbenas, a premium was voted to Addison, for V. Melindres Superba, Grandiflora, Coccinea, Hendersonii, Albicans, and Buistii, the specimens being large and finely trained.

For the best recently introduced Exotic Perennial a premium was assigned to Mr. Young, the plant being Angelonia Grandiflora.

The display of Pelargoniums was magnificent; there being six competitors, and each competitor producing six plants in pots, covered with splendid flowers. The committee made three awards...1. Mr. John Reid, for Garth's Perfection, Sylph, Beatrice, Jehu, Urania, and Roseum Elegans. 2. Mr. Downie, for Conservative, Sylph, Joan of Arc, Grand Duke, Foster's Rosy, and Garth's Perfection. 3. Mr. Young, for Gaines's King, Gaines's Masterpiece, Foster's Sylph, Prima Donna, Joan of Arc, and Louis Quatorze. And for a Seedling of merit, off Alicia, an extra premium was voted to Mr. Young.

The show of Pinks was likewise brilliant. Two premiums were awarded...1. Mr. George James, of Pilrig, whose twenty flowers were, Princess Victoria, Omnibus, Mary, George IV., Queen Victoria, Neptune, Warrior, Village Maid, Robert Burns, Candidate, Miss Johnstone, Conqueror, Prince Albert, Black Prince, Minibus Splendens, Egyptian Prince, Pattison's Queen Victoria, Rival Duke, and Suwarrow. 2. Mr. William Cuthbertson, for Falconar's Jupiter, Rose Diana, Paisley Reform, Omnibus, Pattison's Queen Victoria, Falconar's Calceolus, Hastie's Queen, John Bull, and the following sorts, raised at Dalmeny Park by Mr. Cuthbertson, Lady Waterford, Duchess of Devonshire, Countess of Rosebery, Lady Anson, Lady Louisa Primrose, Lady Theresa, Mrs. Pattison, Frederica, Lady Anne Primrose, Charlie, and Queen Victoria.

The prize for the finest recently introduced Annual Flower was assigned to Mr. Gow, for Portulaca Thellusonii.

For a stand of French and African Marigolds, of large size and great beauty, a premium was voted to Mr. Peter Gemble; and for a small but choice collection of early Dahlias, another premium was awarded to Mr. James.

July 21. Colchester Horticultural Society.—The second Show this season took place at Mr. Jenkin's Rooms and Pleasure Grounds, St. John-street. The various productions of Flowers and Plants were excellent, but the competitors not so numerous as could have been desired.

FLOWERS AND PLANTS.—(Judges, Dr. M'Lean, Messrs. Norman and Bunting.)

Geraniums, best 6, in pots, named sorts...1. Mr. W. Cant, for Alexandrina, Sylph, Rubens, Grand Duke, Lady Murray, and Cant's Seedling. 2. G. Round, Esq., for Sylph, Beauty of Ware, Alexandrina, Lady Palmer, Garrett's Pearl, Louis Quatorze.

Miscellaneous Plants, best 12, in pots, named species...1. Mr. W. Cant, for Russellia Juncea, Thunbergia Leucantha, Alata, Aurantiaca, Fuchsia Fulgens, Ricartonii, Petunia Triumphans, Cant's Seedling, Gesnera Phacelioides, Manettia Cordata, Verbena Splendens, Horticultural Society's Dark Crimson. 2. G. Round, Esq., for Fuchsia Fulgens, Globosa Major, Reflexa, Smith's Grandiflora, Justicia Carnea, Malva Rubra, Abutilon Striatum, Verbena Drummondii, Euphorbia Splendens, Erica Bowieana, Ardisia Crenulata, Sollya Heterophylla.

Seedling Calceolaria...Mr. Louden, gardener to Gen. Rebon.

Specimen Plant...1. Mr. Cant, Erythrina Crista-galli. 2. G. Round, Esq., Russellia Juncea.
Nosegay...Mr. J. Head.
Cut Flowers...1. Mr. W. Cant. 2. Mr. Urpeth. 3. Mr. Head.
Balsams, best 6, in pots...1. Mr. Barrell. 2. Mr. W. Cant.
Cockscombs, best 4...1. R. M. Savile, Esq. 2. Mr. Fearis.
Seedling Picottee, best...Mr. W. Cant.

EXTRA PRIZES.

For the best Design, R. M. Savile, one vol. of the "Botanist,"...Mr. W. Cant.
For the best Melon, A. M'Lean, Esq., president, One Guinea,...Mr. H. Golding.
For the best 6 Balsams, G. Round, Esq., vice-president, Half a Guinea...Mr. Barrell.
For the best 6 Cockscombs, G. Round, Esq., Half a Guinea...Mr. Louden.

COTTAGERS' PRIZES.

Nosegay, best...1. G. Johnson. 2. R. Johnson.

July 21. MUSSELBURGH HORTICULTURAL SOCIETY. The second Meeting for this season, Wednesday, the 21st of July. Prizes:—

Best Pelargoniums...1. Charles M'Intosh, gardener to John Tod, Esq. 2. William M'Auslane, gardener to Admiral Sir David Milne, the kinds being Fosteria Rosea, Garth's Perfection, Climax, Dennis's Perfection, Jewess, Joan of Arc, Alicia, and Lord Hill.
Best Garden Roses...1. Charles M'Intosh. 2. Wm. Denholm, gardener to Sir J. Forrest, Bart.
Best Exotics...1. Wm. Melville, gardener to Sir G. G. Suttie, Bart. 2. Thomas Dunn, gardener to James Bridges, Esq., Bellfield.
Hardy Herbaceous Plants...1. Thos. Dunn. 2. John Liddell, gardener, Canaan House.
Best Anterrhinums...1. John Clark, gardener to Col. Spens. 2. James Hopkirk, gardener to Sir C. D. Ferguson, Bart.
Best 6 Irises...1. James Hopkirk. 2. Thomas Dunn.
Best 3 Balsams...1. Thomas Dunn. 2. John Logan, gardener to Mrs. Moodie.
Best 4 Stocks...1. John Logan. 2. Wm. M'Auslane.
Best 6 Pinks...1. James Gilmour, Mary Cottage, Trinity. 2. John Liddell.
Best 6 Seedling Pansies...1. James Gilmour, for Queen Victoria, Prince Albert, Mary Howitt, Mary Thomson, Miss Neill, and Sir J. Vandeleur. 2. James Muir, gardener to W. M. Innes, Esq.

July 22. BOSTON FLORAL AND HORTICULTURAL SOCIETY.—The second exhibition for the present year took place in the Saloon at Vauxhall Gardens. The Plants exhibited were of very choice description.

The following prizes were awarded:—

H. Rogers, Esq., 9, for Dahlias, Roses, Bouquet, French and African Marigolds, Pansies, Fuchsia, Picottee. R. Collis, Esq., 7, Stove Plant, Geranium, Cockscombs, Balsams, Fuchsia. Mrs. Garfit, 3, Petunia, Herbaceous Plant, Fuchsia. Mr. Rylatt, 3, Dahlias, Carnations and Picottees, Pansies. W. Garfit, jun., Esq., 2, best Greenhouse Plant in flower, Roses. Rev. M. Robinson, 2, rarest Plant, best Stove Plant in Flower. Mr. W. Caister, 2, Geranium, Calceolaria Herbaceous. Mr. Oldman, 2, Carnations and Picottees, French Marigolds. One each to Mr. C. Pocklington, Greenhouse Plant in Flower; Mr. Joyce, Stove Plant in Flower; and Mr. Taylor, Pansies.

July 22. WISBECH FLORAL AND HORTICULTURAL SOCIETY.—In consequence of the very unfavourable state of the weather the company was very small, and the articles exhibited were of rather an inferior description. The following is a list of the prizes awarded:—

Carnation...Mr. Hulton, Lynn.
Picottee...Same.
Collection of ditto, not less than 8.
Fuchsia...H. Jackson, Esq.
Collection of Pansies...Mr. P. Ward.
Collection of Roses, not less than 12...Rev. W. G. Townley.
Second best ditto...Mr. N. Taylor.
The best Collection of Greenhouse Plants, not less than 8, different...W. Peckover, Esq.
Second best ditto...Mr. Wm. Woodcock.
The best Collection of 12 different Annuals...W. Peckover, Esq.
Second best ditto....Mr. N. Taylor.
The best Exotic in Flower...W. Peckover, Esq.
The best Dahlia in Flower...Mr. F. Hulton.

The best 6 Balsams, most varieties...Mr. William Woodcock.

By B. Maund, Esq. F.L.S., the large paper edition of the "Botanic Garden" for 1839, for the best collection of not less than 20 species, cut or in pots, of the Flowers of Hardy Annuals, or Perennial Herbaceous Plants or Shrubs...Wm. Peckover, Esq.

COTTAGERS' PRIZES.—By the Rev. W. G. Townley.

Hydrangeas...Jas. Royal, Wisbech.——Ditto, — Beal, Leverington.
Fuchsia... — Denton, Wisbech.

July 23. SPILSBY AND NEIGHBOURHOOD FLORAL AND HORTICULTURAL SOCIETY.—The second Show of this Society was held in the Town-hall. In consequence of the extremely unfavourable state of the weather, the company from a distance was not quite so numerous as on former occasions. The show of flowers was good.

The following prizes were awarded:—

FLOWERS.

Rev. J. Spence, East Keal, 31, for Dahlias, Stove Plants in flower, Geranium, Calceolarias, Herbaceous Plants, Balsams, Roses, Cut Exotic and Hardy Flowers, Carnations and Picotees, Annual in pot, second rarest Plant, newest Plant, Succulents in flower, Verbena, Fuchsias, second best Bulb of any kind, Exotic Creeper, Lobelia. Mrs. H. Brackenbury, Scrimsby, 17, for Dahlias, Stove Plant in flower, Greenhouse Plants in flower, Geraniums, Calceolarias, Petunias, Exotics, rarest Plant, Verbena, best Bulb of any kind, Gloxinias. J. Hunt, Esq., Addlethorpe, 6, for Roses, French and African Marigolds, Pansies, Geraniums. Mrs. Barker, Spilsby, 5, for Stove Plant in flower, Greenhouse Plant in flower, Verbena, Fuchsia, flowering Greenhouse Shrub. Mrs. Massingberd, Gunby, 2, for Roses, third best Bulb of any kind. Rev. J. Walls, Boothby, 2, for Pansies. Pinks. Mrs. Maddison, Partney, 2, for Pansies. One each to Mrs. Brackenbury, Usselby, for French Marigolds. Mrs. Rawnsley, Halton, for Cut Exotic and Hardy Flowers. Mrs. W. Walker and Mrs. Soulby, Spilsby, for Pansies.

COTTAGERS' PRIZES.

Prizes for Vegetables, Fruit, and Flowers, were awarded to Francis Johnson, East Keal, 5. Joseph Parker, East Keal, 5. George Bogg, Burwell, 5. Joseph Scarber, Spilsby, 4. Richard Goodwin, Toynton, 4. Thomas Bashington, Spilsby, 4. John Dickenson, Hundleby, 3 Mary Olden Dunham, Spilsby, 3. Thomas Vere, Hundleby, 3. William Kendall, Spilsby, 2. George Smith, Spilsby, 2. John Plant, Spilsby, 2. Robert Motson, East Keal, 2. John Wilkinson, Scremby, 2. George Badley, Spilsby, 2. — Snowdon, Halton, 2. Thomas Roberts, East Keal, 2. John Kirkham, Scremby, 2. John Ironmonger, Scremby, 2. One each to Samuel Whitworth, Hundleby; Mark Bush, Scremby; James Riches, Spilsby; John Woodward, Halton; Ann Toynton, East Keal; Elizabeth Moody, East Keal; Susan Motson, East Keal.

July 23. DEVON AND EXETER FLORICULTURAL SOCIETY.—The Carnation and Picottee Exhibition of this Society took place in the pleasure ground of C. Brutton, Esq., Northernhay-place, Exeter. Among the contributors were Mr. Colson, of Baring Crescent, who sent a splendid collection of Carnations and Picottees, and so numerous as to occupy the entire of one of the marquees; as a whole, these were considered the best collection of these flowers ever seen in the West of England.

The Prizes awarded were as follows:—

PREMIER PRIZES.—(Given by Mr. Willmer, of Sunbury, Open.)

Carnations, best stand of 9 Blooms, a Piece of Plate, value Two Guineas...Mr. Colson, of Baring-crescent, for Willmer's Conquering Hero, Wakefield's Paul Pry, Hufton's Duke of Wellington, Wood's William IV., Lady Barrington, Leighton's Atlas, Foxhunter, Burgess's Mary, Jacques's Iris.

Picottees, best stand of 9 Blooms, a Piece of Plate, value Two Guineas...Mr. Colson, ditto, for Jacques's Meteor, Ophelia, Agrippina, Colonel of the Guards, Plenipotentiary, Erin-go-bragh, Mary Ann, Cox's Carthage, Jean Thouin.

PRIZES OPEN TO SUBSCRIBERS ONLY.

Carnations, best stand of 9 Blooms, a Piece of Plate, value Two Guineas...Mr. Griffin, gardener to Mrs. Wells, Cowley-place, for Willmer's Earl of Uxbridge, Wonder of the World, Willmer's Clytemnestra, Conquering Hero, Paul Pry, Queen of the Roses, Willmer's Diomede, Jacques's Georgina, and Ely's Bright Venus.

Picottees, best stand of 9 Blooms, a Piece of Plate, ditto...Mr. Griffin, for Willmer's Zimmerman, Agrippina, Erin-go-bragh, Magnum Bonum, Willmer's Acantha, Beauty of Hemmingford, Plenipotentiary, Wood's Sir R. Hussey, and Strong's Esther.

Best 6 Carnations, 5s....Mr. R. Webber, Silverton, for Willmer's Conquering Hero, Memnon, Moore's William IV., Jacques's Iris, Brookes's Claudius, and Earl Grey. Second best ditto, 3s. 6d....Mr. R. Webber.

Best 6 Picottees, 5s....Mr. R. Webber, for Jacques's Meteor, Giddon's Don Juan, Willmer's Mary Ann, Seedling, Lady Plymouth, and a Seedling. Second best ditto, 3s. 6d.... Mr. R. Webber.

PLANTS.

Best miscellaneous collection, 10s. 6d....Mr. Griffin. Amongst Mr. Griffin's plants were very fine specimens of Elichrysum Proliferum, Erica Tricolor, Erica Irbyana, Erica Ampullacea, Erica Juliana, Erica Viridiflora, Erica Ventricosa Superba, Dryandra Plumosa, Grevillea Robusta; Geraniums. Sylph, Priory Queen, Gem of the West, Bride of Devon, and Conservative. Second ditto, 7s. 6d...Mr. Elmes, gardener to H. Porter, Esq., Winslade. Third ditto, 5s....Mr. J. Clark, Paris-street.

Geraniums, best collection, 7s. 6d....Mr. James Clark. Second ditto, 5s....Mr. Griffin.

Hardy Herbaceous Plants, best collection, 5s....Mr. J. Clark.

Roses, best collection, 5s....Mr. H. Elmes Second ditto, 3s. 6d., ditto.

Heartsease, best collection of 24, 5s....Mr. Jas. Clark. Second ditto, Mr. Colman, gardener to Dr. Barham.

Bouquet, best, 5s....Mr. H. Elmes.

EXTRA PRIZES.

To Mr. Griffin, for Roses; to J. B. Sanders, Esq., for Plants; and to Mr. Elmes, for Dahlias.

A very beautiful collection of Heartsease (not exhibited for a prize), from the garden of of W. Couch, Esq., Swiss Cottage.

There was also a splendid collection of plants sent by Messrs. Sclater, comprising Gesnera Cooperii, Abutilon Striatum, Fuchsia Youellii (very fine and new), Eximia, Gloxinia Grandiflora, Anagallis Cærulea Grandiflora, Cassia Multiflora. A splendid collection of Heartsease, also a very fine collection of Carnations.

July 26. BIGGLESWADE HORTICULTURAL SOCIETY. The summer Show was held in the New Schoolrooms, on Monday, the 26th of July. The following prizes were awarded:—

CARNATIONS.

Best 6...1. Mr. F. Barrenger, Bedford, for Lydia, Barrenger's Surprise, Lovely Ann, Hepworth's Leader, Barringer's Masterpiece, and Queen of Sheba. 2. Mr. W. Pope, Biggleswade, for Queen of Sheba, Wood's William the Fourth, Christian's William the Fourth, Moor's William the Fourth, Alfred, and Paul Pry. 3. Mr. Garratt, for Alfred, Lascelles's Queen of Sheba, Wood's William the Fourth, Duchess of Devonshire, Christian's William the Fourth, and a Seedling named Defiance C. B.

Best of any sort...Mr. Pope, for Paul Pry.

Best Seedling...Mr. Barrenger, for Masterpiece C. B., a first-rate flower.

PICOTTEES.

Best 6...1. Mr. Garratt, for Wood's Queen Victoria, Wood's Agrippina, Wood's Triumphant, Russell's Incomparable, Wood's Duke of Manchester, and Miss Willoughby. 2. Mr. Barrenger, for Giddings's Miss Hennel, Giddings's Don Juan, Giddings's Teaser, Dame Alice, Duke of Wellington, and Hector. 3. Mr. Pope, for Triumphant, Incomparable, Miss Desborough, Miss Willoughby, Miss Nevill, and Wood's Queen Victoria.

Best of any sort...Mr. Pope, for Incomparable.

Best Seedling...Mr. Barrenger, Fairy Queen, P. P.

DAHLIAS.

Best 6...1. W. Curling, Esq., for Beauty of the Plain, Sir F. Burdett, Argo, Unique, Sussex Rival, and Springfield Rival. 2. H. Beauford, Esq., for Jones's Francis, Pickwick, Widnall's Queen, Argo, Springfield Rival, and Marquis of Lothian. 3. W. Hogg, Esq., for Danecroft Rival, Jones's Francis, Marquis of Lothian, Hope, Advancer, and President of the West.

GREENHOUSE PLANTS.

Best 12...1. Mr. Webster, Sandy-place, for Erythrina Crista-galli, Pimelea decussata, Anagallis carnea, Gompholobium polymorphum, Chorizema cordata, Gardenia radicans, Alstrœmeria Pelegrina, Alstrœmeria Ligtu, Sollya heterophylla; Geraniums, Lowndes's Perfection, Jewess, and Joan d'Arc. 2. W. Hogg, Esq., for Fuchsia globosa, Nerium splendens, Hydrangea hortensis, Salvia patens, Salvia fulgens. Geraniums, Foster's Rosea, Alicia, Joan of Arc, Jewess, Diomede, Gem, and Sylph.

STOVE PLANTS.

Best 6...Mr. Webster, for Thunbergia aurantiaca, Thunbergia alata, Thunbergia leucantha, Cactus speciosissima, Vinca rosea, and Cockscomb.

MISCELLANEOUS PLANTS.

Best 12...1. Mr. Webster, for Erythrina crista-galli. Chorizema cordata, Pimelea decussata, Cineraria grandis, Cineraria Fanny Trippet, Anagallis carnea, Thunbergia aurantiaca, Thunbergia leucantha, Thunbergia alata, Campanula pyramidalis, Campanula pyramidalis alba, and Cockscomb. 2. F. Hogg, Esq., for Fuchsia globosa, Salvia patens, Salvia fulgens, Nerium splendens, Cockscomb, Thunbergia aurantiaca, Thunbergia alata, Thunbergia leucantha. Geraniums, Joan of Arc, Jewess, and two Calceolarias.

July 27. SOUTH LONDON FLORICULTURAL SOCIETY.—The Exhibition on Tuesday, July 27, at the Surrey Zoological Gardens, was chiefly characterized by the display of Picottees and Carnations, of which there were many handsome stands, and several good seedlings. Among the exhibitors were Messrs. Barnard, of Brixton; Ward, of Woolwich; Norman, Woolwich; Edmonds, South Lambeth; Bridges, Carshalton; Willmer, Sunbury; Bucknall, Bristol; Dickson, Clapham; Dowler, Bishopsgate; all of whom had stands of first-rate excellence. Among the Seedlings, the Light-edged Picottee, shown by Mr. Barnard, was greatly admired. Mr. Barnard also exhibited a handsome dark-edged variety. Mr. Bucknall exhibited a Flaked Carnation, and Mr. Furchett a Bizarre, both very beautiful flowers.

Roses were shown in good collections by Messrs. Lane and Son, Paul, Dennis, and Burrup. The numerous collections of Cut Flowers, which consisted of many choice varieties, attracted general admiration; that of Mr. Denyer, of Brixton, was very beautiful. Mr. Gard, of Camberwell, Mr. Bruce, Mr. Davis, Mr. Inwood, and Mr. Goodenham, had each fine collections.

Pelargoniums were shown by Mr. Gaines, the only exhibitor, in a stand of twelve, containing the following varieties:—Fireball, Oliver Twist, Sidonia, Captain King, Cerito, Duchess de Nemours, Rosabella, Grand Duke, Colossus, Picta, Elizabeth, and one unnamed. Seedling Pelargoniums by Mr. Pamplin, of Walthamstow.

Dahlias were shown in good collections by Messrs. Jackson, Kingston; Thomson, Iver; and Gunner, Walworth.

Collections of Plants by Mr. Attlee, Mr. Gard, Mr. Pattison, Messrs. Fairbairn, and Mr. Jackson; Cacti, by Mr. Jackson; Cockscombs, by Mr. Scoier and Mr. Woodcock; Heaths, by Mr. Jackson and Mr. Curtis; Heartsease, by Mr. May, Mr. Hancock, Mr. Edmonds, Mr. Bridges, Mr. Henbury, Mr. Fyffe, and many others. Mr. Iliff exhibited a fine collection of Melo-cacti, and other succulents; Mr. Conway some handsome scarlet Geraniums; Mr. Upright a new seedling scented Passiflora; and Mr. Smith, of Dalston, a collection of very large and handsome Fuchsias.

AMATEURS' PRIZES, MEMBERS ONLY.

Best Miscellaneous Plants, not to exceed 12 pots...1. Large Silver Medal, Mr. Edmonds. 2. Middle Silver Medal, Mr. Young.

Roses, in collections of 12 varieties, in bunches, to be exhibited in the Growers' boxes... Large Silver Medal, Mr. Burrup.

Best 12 Blooms of Carnations...1. Large Silver Medal, Mr. Bucknall. 2. Middle Silver Medal, Mr. Humber. 3. Small Silver Medal, Mr. Dowler.

Best 12 Blooms of White-ground Picottees...1. Large Silver Medal, Mr. Edmonds. 2. Middle Silver Medal, Mr. Bridges. 3. Small Silver Medal, Mr. Smith. 4. Second Small Silver Medal, Mr. Clark.

Heartsease, in stands of 24 varieties...1. Large Silver Medal, Mr. Waldron. 2. Middle Silver Medal, Mr. Fyffe. 3. Small Silver Medal, Mr. Edmonds. 4. Second Small Silver Medal, Mr. Dalton.

Best Collection of Cut Flowers...1. Middle Silver Medal, Mr. Davis. 2. Small Silver Medal, Mr. Bushel.

GENTLEMEN'S GARDENERS.

Best Collection of Miscellaneous Plants, not to exceed 24 pots...1. Large Silver Medal Mr. Pattison. 2. Middle Silver Medal, Mr. Attlee. 3. Small Silver Medal, Mr. Gard.

Ericas, in collections of not less than 6 varieties, Middle Silver Medal, Mr. Curtis.

Best collection of 12 Cockscombs...1. Middle Silver Medal, Mr. Scorer. 2. Small Silver Medal, Mr. Woodcock.

Best 12 Blooms of Carnations...Middle Silver Medal, Mr. Embleton.

Best 12 Blooms of White-ground Picottees...Middle Silver Medal, Ditto.

Best collection of 36 Heartsease...1. Middle Silver Medal, Mr. Hancock. 2. Small Silver Medal, Mr. Black.

Best collection of Cut Flowers...1. Large Silver Medal, Mr. J. Inwood. 2. Middle Silver Medal, Mr. Bruce. 3. Small Silver Medal, Mr. Goodenham.

NURSERYMEN AND FLORISTS.

Best collection of Miscellaneous Plants, not to exceed 36 pots...1. Large Silver Medal, Mr. Fairbairn. 2. Middle Silver Medal, Mr. Jackson.

Best collection of Pelargoniums, in 12 varieties...Large Silver Medal, Mr. Gaines.

Ericas, in collections of not less than 8 varieties...Large Silver Medal, Mr. Jackson.

Best collection of Roses, in bunches, to be exhibited in the Growers' boxes...1. Large Silver Medal, Mr. Lane. 2. Middle Silver Medal, Mr. Paul.

Ditto, in collections of 36 varieties, to be exhibited in the Growers' boxes...Small Silver Medal, Mr. Paul.

Best 12 Blooms of Carnations...1. Large Silver Medal, Mr. Norman. 2. Middle Silver Medal, Mr. Willmer. 3. Small Silver Medal, Mr. Hughes.

Best 12 Blooms of White-ground Picottees...1. Large Silver Medal, Mr. Willmer. 2. Middle Silver Medal, Mr. Norman. 3. Small Silver Medal, Mr. Dickson.

Heartsease, in stands of 50 varieties...1. Middle Silver Medal, Mr. Thompson. 2. Small Silver Medal, Mr. J. May.

Best collection of Cut Flowers...1. Middle Silver Medal, Mr. Denyer. 2. Small Silver Medal, Mr. Fairbairn.

OPEN TO ALL CLASSES.

Best 24 Succulents...Large Silver Medal, Mr. Chandler.

Best Specimen Plants, of six distinct genera (Orchidaceæ excluded)...1. Large Silver Medal, Mr. Bruce. 2. Middle Silver Medal, Mr. Attlee.

Best Specimen Plant, any genera...1. Large Silver Medal, Mr. Jackson. 2. Middle Silver Medal, Mr. Dawson. 3. Small Silver Medal, Mr. Garrett.

EXTRA PRIZES OFFERED BY MEMBERS OF THE SOCIETY TO AMATEURS.

By Mr. J. Dickson, for the best 12 White-ground Picottees...a Silver Cup, value Five Guineas, Mr. Bucknall.

By an Amateur, for 2d best ditto...Three Guineas, Mr. Edmonds.

By ditto, for the 3d best ditto...Two Guineas, Mr. Dowler.

TO NURSERYMEN.

By Subscription, for the best 12 White-ground Picottees,...a Silver Cup, value Five Guineas. Mr. Willmer.

By an Amateur, for the 2d best ditto...Three Guineas, Mr. Norman.

By ditto, for the 3d best ditto...Two Guineas, Mr. Dickson.

By R. Headley, Esq., open to all Classes, for the best Bizarre Carnation, single bloom... One Guinea, Mr. Twichett.

Best Flaked ditto...One Guinea, Mr. Bucknall.

Best Light-edged Picottee, white ground...One Guinea, Mr. Barnard.

Best Heavy-edged ditto...One Guinea, ditto.

By W. T. Iliff, Esq., as an open prize, for the best collection of Cut Indigenous Plants in Flower, 24 species, with name and place of growth...the Linnæan Medal, Mr. Bruce.

Seedling Carnations...1. Mr. Twitchett. 2. Mr. Bucknall.

Ditto Picottees...1. Mr. Headley. 2. Mr. Bridges.

EXTRA PRIZES.

Collection of Picottees...Mr. Barnard.

Single Specimen Plants...1. Mr. Dickson. 2. Mr. Jackson. 3. Mr. Bruce. 4. Mr. Cuthill. 5. Mr. H. Tansley. 6. Mr. A. Reed.

Collection of Alstrœmerias...Mr. Garrett.

July 27. BATH ROYAL HORTICULTURAL SOCIETY, VICTORIA PARK.—The fourth Show of the season was held at the Society's Gardens. The following is the list of prizes:—

NURSERYMEN AND DEALERS.

Stove Plants, collection of 5...Messrs. Salter and Wheeler.

Greenhouse ditto, collection of 12...Ditto.

Calceolarias Shrubby, best 12...Ditto.

Herbaceous ditto...Ditto.

Cape Ericas, best 3...Ditto.

Amaryllis, best 3...Mr. Carpenter.

Balsams, best 6...Messrs. Salter and Wheeler.

SUBSCRIBERS AND AMATEURS GENERALLY.

Stove Plants, collection of 3...J. Jarrett, Esq.
Single Specimen...Ditto.
Greenhouse ditto, single specimen...1. Ditto. 2. S. Barrow, Esq.
Basket of Calceolarias...J. Jarrett, Esq.
Alstrœmerias, best collection...Mr. G. Shaw.
Amaryllis, best 3...Mr. Targett
Balsams, best 4...J. M. Yeeles, Esq.
Cockscombs, best 4...Miss Whitehead.
Tender Annuals, best 6...Ditto.
Hardy Plants, best 10...J. M. Yeeles, Esq.
Herbaceous ditto, best 6...S. Barrow, Esq.

OPEN TO BOTH CLASSES.

Orchideous, best 3...J. Jarrett, Esq.
Ornamental Basket of Plants...1. Messrs. Salter and Co. 2. J. M. Yeeles, Esq. 3. C. C. Elwes, Esq. 4. Mr. G. Shaw.

FLORISTS' FLOWERS AND CUT FLOWERS.—NURSERYMEN AND DEALERS.

Carnations, 6 Blooms...1. Mr. Miller, Bristol. 2. Mr. Sealey, Bristol.
Picottees, 6 Blooms...Mr. Miller, Bristol.
Dahlias, best stand of 9...Mr. Walters, Hilperton.

AMATEURS AND SUBSCRIBERS GENERALLY.

Carnations, best stand of 6 Blooms...1 and 2. G. C. Tugwell, Esq. 3. Mr. Nias.
Picottees, stand of 3 Flowers...1. G. C. Tugwell, Esq. 2. Mr. Parker.
Dahlias, best stand of 5...1. C. Sainsbury, Esq. 2. J. M. Yeeles, Esq.

OPEN TO BOTH CLASSES.

Ornamental Basket of Cut Flowers...1. S. Barrow, Esq. 2. Messrs. Salter and Co.
Ornamental Devices...1. Mr. G. Shaw. 2. Mr. Pearce.
C. C. Elwes', Esq., Prize for Carnations...1 and 2. Miss Whitehead.

EXTRA PRIZES.

Hardy Herbaceous...Messrs. Salter and Co.
Calceolarias...Ditto
Seedling Fuchsia...Ditto.
German Stock...J. M. Yeeles, Esq.
Extra Prize Annual...Mr. Cole, Wellow.
Basket of Cut Flowers...Rev. D. Paul.

July 27. Cheltenham Horticultural and Floral Association.—The fourth Exhibition of this Society took place at the Pitville Pump Room. The fineness of the afternoon attracted as large an attendance of visitors as we have witnessed on any former occasion. The show of fruits, flowers, and esculents, was fully equal to any of the present season, and the award of the various prizes appeared to give very general satisfaction. It seems almost invidious to particularize, yet we must notice a beautiful balloon, by Pipe, tastefully decorated with various coloured flowers, which excited general admiration. The collection of carnations, by Hodges, was splendid in the extreme, and was admitted on all hands to be the finest hitherto displayed. A basket of flowers, by Pigot, the centre very fine water lilies, also struck us as unique. The band of the establishment attended and enlivened the company by performing a selection of favourite airs. We give underneath a list of the prizes, and to whom awarded:—

FOR AMATEURS.

Carnations, stand of 5 blooms, different varieties...1. Brown's Bishop of Gloucester, Bellerophon, Earl Grey, Queen Adelaide, Duke of Devonshire; Rev. F. Laing. 2. Flora's Garland, Squire Carter, Bishop of Gloucester, Duchess of Kent; Henry Thompson, Esq. 3. Beech's Friendship, Lady Cave, Pope's Victory, Lady Ridley, Duchess of Newcastle; Rev. F. Laing.

Picottees, stand of 5 blooms, different varieties...1. Martin's Queen Victoria, Charles X., Mt. Vesuvius, Arnott's Seedling, Martin's Prince George; Rev. F. Laing. 2. Grace Darling, Hemmingford Beauty, Queen Victoria, Sharpe's Unique, Sharpe's Flora; Henry Thompson, Esq. 3. Seedling, Martin's Queen of Victory, Wood's Phetard, Lady Peel, Will Stutley; Rev. F. Laing.

Cockscombs...1. P. Thompson, Esq. 2. Miss Cregoe Colmore.
Balsams...1. Miss Cregoe Colmore. 2. P. Thompson, Esq.

Stove or Greenhouse Plants...1. W. Pitt, Esq. 2. Fuchsia Fulgens, Mr. W. Heath.

Geraniums...1. Coronation, P. Thompson, Esq. 2. W. Pitt, Esq.

Hardy Annuals...1. J. Taylor, Esq. 2. Miss Cregoe Colmore.

Hardy Herbaceous Plants...1. Pentstemon Gentianoides Coccinia, Miss C. Colmore. 2. Phlox Omniflora, P. Thompson, Esq.

Plants, the best miscellaneous collection of 6...1. Mimmulus Cardinalis, Salvia Patens, Fuchsia Fulgens, Anterrhinum Caryophylloides, Verbena Splendens, Geranium Conservative; P. Thompson, Esq. 2. Miss C. Colmore.

Ornamental Basket of Plants...Miss C. Colmore.

OrnamentalBasket of Cut Flowers—Wm. Pitt, Esq.

Collection of Wild Flowers...Mrs. Newall.

EXTRA PRIZES.

Twelve Dahlias...Mr. W. Heath.

Basket of Cockscombs...P. Thompson, Esq.

Ten Hydrangeas...Miss C. Colmore.

Collection of Plants...Miss Wallace.

MEDALS.

Best Collection of 10 Carnations...1. Will Cobbett, Brooks's Eliza, Flora's Garland, Young's Earl Grey, Brown's Bishop of Gloucester, Squire Clarke, Duchess of Kent, Jacques's Rose Flake, Wakefield's Paul Pry, Kinfare Hero; H. Thompson, Esq. 2. Paul Pry, Bishop of Gloucester, London Queen, Leighton's Bellerophon, Violet Superb, Duke of Devonshire, Earl Grey, Queen Adelaide, Bright Phœbus, William IV.; Rev. F. Laing.

BOTANIC GARDEN FOR 1840.

Eschsholtzia Crocea, Tagetes Patula, Anterrhinum Caryophylloides, Clematis Florida, Flora Pleno, Collinsia Bicolor, Yellow Noisette Rose, Cyanus Minor, Eutoca Vicida, Potentilla Lutea, Dianthus Aggregatus, Clintonia Pulchella, Lobelia Cardinalis, Amphicome Arguta, Catananche Bicolor, Malope Trifida, Campanula Carpathica, Salvia Patens, Phlox Omniflora, Pentstemon Gentianoides Coccinia, Lilium Longiflora Alba, Chelone Barbata, Lupinus Mutabilis, Mathiola Annua, Madia Splendens, Lathyris Latifolia, Spirea Areaflora, Gladiolus Colvillii, Gypsophila Elegans, Clarkia Pulchella, Agapanthus Umbellatus, Salpiglossus Picta, Hydrangea Hortensis, Erysimum Prowskianum, Cytisus Nigricans, Schizanthus Pinnata, Potentilla Hopwoodiana; Miss C. Colmore.

NURSERYMEN'S PRIZES.

Carnations, stand of 12 Blooms...1. Flora's Garland, Lydia, Strong's King, Colonel of the Blues, Ely's Lady Gardener, Steel's William IV., King of the Roses, Cartwright's Rainbow, Duchess of Devonshire, Turner's Princess Charlotte, Willmer's Regina, Wakefield's Paul Pry; Mr. Hodges, Imperial Nursery.

Picottees, stand of 12 Blooms...1. Martin's Queen Victoria, Queen of England, Wilmer's Laytonia, Waine's Victoria, Lady Peel, Maid of the Mill, Agrippina, Willmer's Momus, Wakefield's Zilla, Willmer's Acanthea, Miss Campbell, Martin's Prince George; Mr. Hodges. 2. Geve's Moonraker, Woodfield's Miss Bacon, Mayo's Wellington, Groom's Faunus, Donna Maria, Pigott's Flora, Nestor, Pigott's Zimmerman, Martin's Prince George, Lady of the Lake, Madame Laffage, Boothman's Victoria; Mr. Pipe, Montpelier Gardens.

Pansies...Mr. Arnott.

Plants, collection of 6...1. Erica Ampullacea, ditto Radiata, ditto Westphalensia, ditto Juliana, Brachycome Iberidifolia; Mr. Hodges. 2. Erica Ampullacea, ditto Nudiflora, ditto Irbyana, ditto Bowiana, ditto Reflexa Alba, ditto Phlox Omniflora; Mr. Pipe.

Ornamental Basket of Plants...1. Mr. Hodges. 2. Mr. Pipe.

Ornamental Device of Cut Flowers...Mr. Pipe.

Specimen Plant...1. Fuchsia Fulgens, Mr. Hodges. 2. Ditto, Mr. Arnott.

EXTRA PRIZES.

Collection of Geraniums...Mr. Hodges.

Basket of Plants...Mr. Arnott.

Tray of Cucumbers...Men of Kent, Mr. Hurlston.

NURSERYMEN'S MEDAL.

Collection of 12 Plants...1. Anigozanthus Ruffa, Roella Ciliata, Fuchsia Fulgens, ditto Globosa Erecta, Rondeletia Speciosa, Erica Tricolor, ditto Viridiflora, ditto Ampullacea, ditto Irbyana, ditto Ventricosa, ditto Reflexa Alba, Gloxinia Speciosa; Mr. Pipe. 2. Erica Eweria, ditto Westphalensia, ditto Tricolor Superba, ditto Incarnata, ditto Ampullacea, ditto Cubica Major, ditto Infundibuliformis, Statice Puberula, Brachycome Iberidifolia, Lilium Japonicum, Fuchsia Standishii; Mr. Hodges.

July 28. DUNDEE FLORAL AND HORTICULTURAL SOCIETY. The third Meeting of this Society for the season was held in the Caledonian Hall, Castle-street, on Wednesday, the 28th of July. The following is a list of the prizes :—

PLANTS AND FLOWERS.

Best 6 Pinks...1. Mr. P. Brown, gardener to John Sanderson, Magdalen Yard, not named. 2. Mr. David Jamison, not named.

Best 12 Pinks...1. Mr. P. Brown, not named. 2. D. Martin, Esq., Rose Angle, not named.

Best Seedling ditto...1. D. Martin, Esq. 2. Mr. James Wanlass, Rhyhill.

Best 4 Calceolarias, in pots...1. Alexander Easson, Esq., Forebank, for Hope, Augusta, British Queen, and Sir John Thorold. 2. Charles Clarke, Esq., Westfield Cottage, for Augusta, Sir John Thorold, Picta coccinea, and a Seedling.

Best 8 ditto...1. Alexander Easson, Esq., for Sir John Thorold, Miss Gladston, Picta coccinea. Formosa, British Queen, Speciosa, Adonis, and a Seedling. 2. Charles Clark, Esq., for Dicksonia, King, Hugo Grotius, and five Seedlings.

Best Seedling...Charles Clark, Esq.

Best 6 Verbenas...Alexander Easson, Esq., for Aubletia hybrida, Drummondii, Buistii, Hendersonii, Tweediana grandiflora, and Melindris latifolia.

Best variety of ditto, cut flowers...1. The Very Rev. Dean Horsley. 2. Sir J. Ogilvy, Bt.

Best 3 Fuchsias...1. Mr. James Wanlass. 2. Dr. A. Patterson.

Best 3 Pelargoniums...1. Sir John Ogilvy, Bart. not named. 2. Alexander Easson, Esq., for Alexandrina, Joan of Arc, and Foster's Alicia.

Best 6 Pansies...1. D. Miln, Esq., for Belzoni, Defiance, Climax, Bruceana, Amato, and Seedling. 2. Mr. James Tait, Thane's Park, not named.

Best 12 ditto...1. Mr. G. Simpson, for Gem, Belzoni, Defiance, Clark's Mary, Don John, Gaines's Victoria, Beauty of Edmonton, Lot's Wife, Mulberry, Chimpanzee, Immutabilis, and one not named. 2. D. Miln, Esq., for Amato, Belzoni, Climax, Defiance, Mulberry, Marshal Soult, Rival Doctor, Clark's Mary, and five Seedlings.

Best Seedling...1. Rev. S. Miller, Monifeith. 2. James Jamison, Esq.

Best Specimen Bulb in pot...1. Sir John Ogilvy, for a Babiana. 2. A. Easson, Esq., for Alstrœmeria Hookerii.

Best variety of Bulbs, cut flowers...Charles Clark, Esq.

Best 6 Petunias...1. D. Miln, Esq., for Black Prince, Duchess of Kent, and 4 Seedlings. 2. Mr. James Wanlass, not named.

Best 8 Irises...Mr. James Tait.

Best 10 Roses...1. Charles Guthrie, Esq., not named. 2. D. Martin, Esq., not named.

Best 20 ditto...1. Charles Guthrie, Esq., not named. 2. Dr. A. Patterson.

Best variety of China Roses...1. Charles Guthrie, Esq. 2. Dr. A. Patterson.

Best Seedling Rose...Charles Guthrie, Esq.

Best specimen Plant for beauty...1. A. Easson, Esq., for a Fuchsia globosa. 2. D. Miln, Esq.. for Erithrina crista-galli.

Best ditto for rarity...1. Dr. A. Patterson. 2. Alex. Easson, Esq., for Cosmelia rubra.

Best 6 Greenhouse Plants...1. A. Easson, Esq., Lechenaultia formosa, Pimelea linifolia and sylvestra, Statice mucronata, puberula, and arborea. 2. Charles Clark, for Fuchsia fulgens, Lechenaultia Baxterii, Tropæolum majus pleno, Pimelea decussata, and Statice puberula and mucronata.

Best pair of Heaths...1. Charles Clark, Esq., for Ventricosa superba and Cerinthoides. 2. Mr. J. Wanlass, not named.

Best Greenhouse Climber...1. Mr. James Wanlass, for Maurandya Barclayana. 2. Alex. Easson, Esq., for Clematis bicolor.

Best 12 Specimens of Greenhouse Blooms, cut flowers...1. Mr. James Kid, gardener to Lord Kinnaird. 2. Sir John Ogilvy, Bart.

Best 8 Herbaceous Blooms...1. J. C. Lindsay, Esq., Carolina Port. 2. C. Guthrie, Esq.

Best 8 Annuals...1. Charles Clark, Esq. 2. D. Miln, Esq.

Best variety of Double Stocks...1. Capt. Douglas, Broughty Ferry. 2. Mr. John Hampton, Perth-road.

Much interest was excited by a sweepstakes for Pansies, of eight subscribers, for 12 Flowers, which was won by...1. Charles Clark, Esq., with Robin Adair, Lady Goodrich, Widnall's Amato, Defiance, and Edina, Queen, Page's Conservative, Brown's Sarah, Lady Flora Hastings, Glover's Edwin, Childe Harold, and Conqueror of Europe. 2. James Jamison, Esq., with Andromache, Lord Nelson, Belzoni, Defiance, Mulberry, Widnall's Hero, Downton's Coronation, Miss Hoare, Eliza, Mary Anna, Queen, and a Seedling.

A Sweepstakes for 6 Pinks, was won by...1. Mr. John Hampton. 2. Mr. P. Brown.

July 28. LEICESTERSHIRE FLORAL AND HORTICULTURAL SOCIETY. The third Show this season, for Carnations, Picottees, and Stove and Greenhouse Plants, was held at the Exchange Rooms, on Wednesday, July 28. The fruits and vegetables were good, but the productions generally were limited. Some beautiful specimens of cut Verbenas, and other greenhouse flowers, were sent from Sir F. G. Fowke, Bart. Dahlias of several of the most favourite sorts were sent by Messrs. Harden, Morley, and Smalley. The awards of the judges were as follows:—

CARNATIONS.—FIRST CLASS.

First Pan of 9 Flowers...Mr. G. Hudson, with Rainford's Gameboy, Ely's Lord Milton, Toone's Ringleader, Pearson's Enchanter, Greasley's Village Maid, Mrs. Hunter, Maw's Derby Willow, Hudson's Venus, Hufton's Mrs. Ray.

CARNATIONS.—SECOND CLASS.

First Pan of 6...Mr. J. Smalley, with Hepworth's Leader, Frith's Virginius, Turner's Princess Charlotte, Smalley's Wonderful, Wigg's Earl of Leicester, and Smalley's Prince Albert.

First Pan of 6 Picottees...Ditto, with Maw's Derby Willow, Marris's Mary, Hufton's Nehemiah, Hufton's Drusilla Seedling, L. E. purple, and Palmer's Flora.

First Pan of 3 Carnations...Ditto, with Wakefield's Paul Pry, Hepworth's Leader, and Millward's Premier.

First Pan of 3 Picottees...Ditto, with Hufton's Drusilla, Maw's Derby Willow, and Palmer's Flora.

Scarlet Bizarres...1. Patriarch, Mr. Hudson; 2. Hepworth's Leader, Mr. W. Mitchell; 3. Ely's Jolly Dragoon, Mr. G. Hudson; 4. Conqueror, Mr. J. Smalley; 5. Seedling, ditto; 6. Ely's Colonel Wainman, Mr. G. Hudson; 7. Ely's Earl of Mexborough, ditto; 8. Walmsley's William the Fourth, ditto.

Crimson Bizarres...1. Cartwright's Rainbow, Mr. W. Musson; 2. Squire Dawson, Mr. G. Hudson; 3. Ely's Lord Milton, ditto; 4. Taylor's Birmingham, Mr. R. Marris; 5. Wakefield's Paul Pry, Mr. J. Smalley; 6. Seedling, Mr. R. Marris; 7. Gregory's Alfred, Rev. S Wigg; 8. Bloomsbury, Mr. Hudson.

Scarlet Flakes...1. Toone's Ringleader, Mr. W. Musson; 2. Orson's Rob Roy, Mr. G. Hudson; 3. Stearne's Dr. Barnes, Rev. S. Wigg; 4. Pearson's Madame Mara, Mr. G. Hudson; 5. Adenbrooke's Lydia, ditto; 6 Smalley's Fair Ellen, Mr. J. Smalley; 7. Thornicroft's Venus, Mr. J. Smalley; 8. Earl of Leicester, Mr. W. Musson.

Rose Flakes...1. Greasley's Village Maid, Mr. G. Hudson; 2. Leighton's Sir George Crewe, Mr. W. Mitchell; 3. Smalley's Oadby Lass, Mr. J. Smalley; 4. Smalley's Wonderful, Mr. J. Smalley; 5. Hudson's Lady Flora, M. G. Hudson; 6. Ely's Lovely Ann, Mr. G. Hudson; 7. Malpas's Lady Gray, Mr. J. Smalley; 8. Ely's Lady Gardener, Mr. G. Walker.

Purple Flakes...1. Turner's Princess Charlotte, Mr. W. Musson; 2. Mungo Park, Mr. J. Smalley; 3. Whittaker's William the Fourth, Mr. Holyoake; 4. Millward's Premier, Mr. G. Hudson; 5. Muscroft's Village Maid, Mr. J. Hudson; 6. Lascelles's Queen of Sheba, Mr. G. Hudson; 7. Pearson's Enchanter, Hudson; 8. Smalley's Prince Albert, Mr. J. Smalley.

Light-edged Red Picottees...1. Hudson's Elizabeth, Mr. G. Hudson; 2. Smalley's Victoria, Mr. J. Smalley; 3. Sharp's Hector, Mr. R. Marris; 4. Palmer's Flora, Mr. W. Musson; 5. Sharp's Unique, Mr. J. Smalley; 6. Wollard's Miss Bacon, Mr. J. Hudson; 7. Russell's Incomparable, Mr. J. Smalley; 8. Hudson's Bishop of London, Mr. G. Hudson.

Heavy-edged Red Picottees...1. Maw's Derby Willow, Mr. J. Smalley; 2. Hurst's Elizabeth, Mr. J Smalley; 3. Sir Thomas, Mr. G. Walker; 4. Taylor's Lady Nelson, Mr. W Mitchell; 5. Marris's Mary, Mr. J. Smalley; 6. Hardy's Matchless Hero; 7. Martin's Prince George, Mr. J. Smalley; 8. Hudson's Victory, Mr. R. Marris.

Light-edged Purple Picottees...1. Wilson's Pluperfect, Mr. W. Musson; 2. Hudson's Maria, Mr. R. Marris; 3. Hudson's Phœbe, Mr. G. Hudson; 4. Hudson's Enchanter, Mr. G. Hudson; 5. Ely's Dr. Horner, Mr. J. Smalley; 6. Seedling, Mr. J. Smalley; 7. Lovely Ann, Rev. S. Wigg; 8. Hufton's Miss Willoughby, ditto.

Heavy-edged Purple Picottees...1. Hufton's Drusilla, Mr. J. Smalley; 3. Hufton's Nehemiah, Mr. G. Hudson; 4. Hufton's Mrs. Ray, Mr. G. Hudson; 5. Hufton's Isabella, Mr. Holyoake; 6. Hoyle's Fair Phyllis, Mr. W. Mitchell; 7. Miss Hunter, Mr. G. Hudson; 8. Ever-Blue Bell, Mr. Holyoake.

First Pan of 12 Pansies...Mr. J. Coleman.

First Pan of 6 ditto...Mr. J. Smalley.

First 12 Hardy Plants...Mr. G. Walker...Six ditto, ditto.

First 3 Stove Plants...Volkameria Odorata, Roella Formosa and Plumbago Rosea, Dr. Shaw (T. Christian, gardener).

First 3 Greenhouse Plants...Anagallis Grandiflora, Agapanthus umbellatus, and Hydrangea Mutabilis, J. Phillips, Esq. (T. Christian, gardener.)

Second ditto...Fuchsia Globosa, Heliotropium Peruvianum, and Hydrangea Mutabilis, Dr. Shaw (T. Christian, gardener).

Non-Subscribers...Carnations and Picottees, among which was a fine Bloom of Martin's Victoria Yellow Picottee.

July 29. GRANTHAM FLORAL AND HORTICULTURAL SOCIETY.—The second Exhibition of this Society for the present season was held at the Guildhall, for the exhibition of Carnations, &c. List of prizes:—

CARNATIONS.

1. Mr. Whittaker, for Willmer's Adamas. Col. Macqueen, Pickering's Harriet, Sir George Crewe, Derby Willow, Hurst's Queen Victoria, Willmer's Miss Willmer, Admiral Sotheron. 2. Mr. Banton, for Hepworth's Leader, Griesley's Lord Brougham, Simpson's Marquis of Granby, Queen of Sheba, Ely's Queen of Roses, Hird's Alpha, Ellingworth's Randolph, Banton's Royal Sailor, Banton's Shepherdess.

Scarlet Bizarres...1. Mr. Banton, Banton's Belisarius. 2. Mr. Whittaker, Willmer's No. 27. 3. Mr. Banton, Belisarius. 4. Ditto, Gameboy. 5. Ditto, Telemachus. 6. Mr. Yeomans, Gameboy.

Crimson Bizarres...1. Mr. Banton, Gregory's King Alfred. 2. Ditto, Banton's Bridegroom. 3. Ditto, General Fairfax. 4. Mr. Yeomans, Duke of Bedford. 5 and 6. Mr. Rilott, Paul Pry.

Scarlet Flakes...1. Mr. Banton, Banton's Napoleon. 2. Mr. Buckwell, Rowton. 3 and 4. Mr. Yeomans, Simpson's Marquis of Granby. 5. Ditto, Wilson's William IV. 6. Mr. Banton, Sir Humphrey Davy.

Purple Flakes...1 and 2. Mr. Banton, Lascelles's Queen of Sheba. 3. Mr. Whittaker, Princess Charlotte. 4. Mr. Rilott, Millwood's Premier. 5. Mr. Banton, Princess Charlotte. 6. Mr. Whittaker, Willmer's Don John.

Rose Flakes...1. Mr. Rilott, Duchess of Devonshire. 2. Mr. Banton, Fairy Queen. 3. Mr. Whittaker, Brown's Luna. 4. Mr. Banton, Pigott's Queen Adelaide. 5. Mr. Whittaker, Lady Vernon. 6. Mr. Banton, Sir George Crewe.

PICOTTEES.

Heavy-edged Red...1. Mr. Whittaker, Hurst's Adelaide. 2. Ditto, Hurst's Duke of Wellington. 3 and 4. Mr. Yeomans, Victoria. 5. Mr. Buckwell, Pride of London. 6. Mr. Whittaker, Derby Willow.

Light-edged Red...1. Mr. Yeomans, Hurst's Lord Manvers. 2. Mr. Rilott, ditto. 3. Mr. Burbridge, Miss Bacon. 4. Mr. Banton, Banton's Miss Ashwell. 5 and 6. Mr. Burbridge, Miss Bacon.

Heavy-edged Purple...1 and 2. Mr. Banton, Orson's Maria. 3. Mr. Whittaker, Hyphron. 4. Mr. Rilott, Lady Peel. 5. Mr. Buckwell, Boothman's Victoria. 6. Mr. Whittaker, Willmer's Flora.

Light-edged Purple...1. Mr. Banton, Lady Harewood. 2. Ditto, Orson's Beauteous Queen. 3. Mr. Whittaker, Dr. Cook. 4. Mr. Buckwell, Unknown.

Heartsease, 12 best...Mr. Sharman, for Amato, Defiance, Masterpiece, Mulberry, Miss Chance, Climax, Eliza, Northern Lion, and four Seedlings.

Geraniums, 6 best...1. Mr. Sharman, for Foresterii Rosea, Beauty of Ware, Climax, Speculum Mundi, Fosterii, Victoria. 2. Mr. Buckwell, for Dennis's Perfection, Maid of Athens, Diomede, Ann of Cleves, Gem, Climax.

China and Noisette Roses, 12 best...Mr. Sharman.

Greenhouse Plants, 6 best...Mr. Sharman, for Diplacus Puniceus, Lantana Selloviana, Cineraria King, ditto Queen, Geranium Speculum Mundi, Calceolaria Seedling.

Calceolarias, 6 best...1. Mr. Sharman, for Anna Maria, Sharmanii, Sharman's Queen, Sharman's Sir John Thorold, Major, Superb, Magnet. 2. Mr. Buckwell, for Gem, Cisterieusus, Criterion, and three unknown.

Best Group of Plants...Mr. Sharman, for Lantana Mutabilis, Euphorbia Fulgens, Thunbergia Alata, Gesnera Bulbosa, Gesnera Splendens, Vinca Rosea, Treviana Coccinea, Russelia Juncea, Roella Cœrulea, Fuchsia Fulgens, Fuchsia Globosa Major, Fuchsia Erecta, Fuchsia Rosea, Seedling, Gloxinia Speciosa, Chloris Radiata, Cockscomb, Ardisia Crenata, Oxalis Deppei, Siphocampylos Fulgens, Egg Plant.

Fuchsias, 6 best...Mr. Sharman, for Globosa Major, Globosa, Inflata, White's Grandiflora, Atkinsonia, Elegans.

Best Bouquet...1. Mr. Sharman. 2. Mr. Buckwell.

Best Design...1. Buckwell. 2. Mr. Sharman—Both very good.

AMATEURS' PRIZES.

Best 15 Cut Specimens of Hardy Flowers, Annuals, Perennials, Herbaceous Plants, or Shrubs...1. R. K. Johnson, Esq. 2. Mr. Dixon.

Six best Greenhouse Plants...Mr. Dixon

July 29. WINGHAM FLOWER SHOW.

Best 3 Geraniums...1. Alexandrina, Hericarhanium, Climax; Rev. C. Bayley. 2. Sidonia, Joan of Arc, Alexandrine; Rev. C. Bayley.

Best 3 Balsams...Denne Denne, Esq.

Best 3 Cockscombs...Ditto.

Best 3 Perennials...Phlox Brilliant, Agapanthus Umbellatus, Phlox Speciosa; Mrs. Papillon.

Best 3 Annuals...Thunbergia alata aurantiaca, T. alata alba, T. alata; Mr. Sankey.

Best Climbing Plant...Tropæolum tricolor, Mr. Keeler.

Best 3 Fuchsias...Standishii, Macrostoma, Fulgens; Mr. Sankey.

Best Fuchsia Fulgens...Lady Bridges.

Best 3 Ericas...E. vestita rosea, E. stellata, E. cruenta curviflora; Mr. Keeler.

Best 3 Greenhouse Plants...1. Cassinea aurea, Crassula coccinea, Malalurca thymifolia; J. Godfrey, Esq. 2. Lechenaultia formosa, Anagallis Philipsii, Nierunbergia gracilis; Mr. Sankey.

Best Ditto...Sollya linearis, J. Godfrey, Esq.

CUT FLOWERS.

Best 6 Roses...1. Enchantress, La Pactole, Yellow China, Comtesse Grill, Blush du Provence, Victoire Argente; J. Godfrey, Esq. 2. Armée Vibert, Crimson Globe, White Provence, Maria Leonida, Crimson Moss, Enchantress; J. Godfrey, Esq.

Best 6 Dahlias...1. Henrietta, Beatrice, Hope, Ruby, Climax, Harwood's Defiance; Mr. Juillion. 2. Amata, Spectabile, Vivid, Hope, Beauty of Bedford, Gaines's Primrose; J. P. Plumptre, Esq. M.P.

Best 6 Carnations...Jacques, Gloriana, Flora's Garland, Conquering Hero, Prince Albert, Lydia; Rev. J. G. Hodgson.

Best 6 Picottees...Victoria, Vesuvius, Sharpe's Wellington, Maid of the Mill, Agrippina, Nehemiah; Rev. J. G. Hodgson.

Best 12 Pansies...1. Aladdin, Carlo Dolci, Rival Queen, Mentor, Vivid, Jewess, Ariel, Majestic, Grand Duke, Oberon, Midas, Sylph; Mr. Juillion. 2. Maria, Aladdin, Grand Duke, Mountjoy's Queen, Vivid, Adelaide, Coronation, Angelina, Miss Sebright, Sydney, Victory, Triumph; Mr. Juillion.

Best 6 German Stocks...1. Mr. Dodds, 2. Mr. H Branford.

Best 12 Perennials...Mr. Sankey.

Best 12 Annuals...R. Brooke, Esq.

Best Bouquet, including Greenhouse or Forced and Hardy Flowers...Rev. C. Bayley.

Best Bouquet, Hardy Flowers only...J. P. Plumptre, Esq.

Best Floral Device...1. Arm Chair, Mr. W. Branford; 2. Basket, Miss Rigden,

COTTAGER'S PRIZES.

Best Geranium...Edward Goodban, Wingham.

Best Plant...John Tucker, Stodmarsh.

Fruit and Vegetables for Subscribers and Cottagers numerous.

July 30. NORTH HERTS AND SOUTH BEDS HORTICULTURAL SOCIETY. The Exhibition for Carnations and Picottees took place at Hitchin, July 30.

Carnations, 12 best...1. Mr. Barringer, Bedford; Game Boy, Barringer's Fire King, Wilson's William the Fourth, Paul Pry, Barringer's Surprise, Barringer's Enchantress, Queen of Sheba, Turner's Princess, Barringer's Apollo, Ely's Lovely Ann, Duke of Leeds, Ely's Mr. Granger. 2. Mr. Garratt, Codicote; Wood's William the Fourth, Alfred the Great, Gregory's King Alfred, Paul Pry, Fletcher's Duchess of Devonshire, Queen of Sheba, Puxley Queen, Duke of Roxburgh, Wheeler's Victory, Wild's Perfection, Seedling, Lancashire Lass.

Ditto, 6 best...1. Mr. Wm. Pope, Biggleswade; Wilson's William the Fourth, Paul Pry, Wood's William the Fourth, Christian's William the Fourth, Queen of Sheba, Gregory's King Alfred. 2. Hon. Dudley Ryder, Ickleford. 3. F. P. Delmè Radcliffe, Esq. Hitchin.

Ditto, 4 best...1. Wm. Curling, Esq. Hitchin. 2. Joseph Sharples, Esq. Hitchin.

Ditto, best single specimen...Mr. Barringer, Barringer's Surprise.

Ditto, best seedling...Mr. Barringer, Barringer's Masterpiece.

Picottees, 12 best...1. Mr. Barringer, Bedford; Giddins's Teazer, Giddins's Marchioness of Townsend, Giddins's Joan of Arc, Giddins's Miss Hennell, Giddins's Nimrod, Giddins's Conqueror, Wood's Queen Victoria, Barringer's Fairy Queen, Barringer's Beauty of Bedford, Sharp's Duke of Wellington, Sharp's Hector, Martin's Queen Victoria. 2. Mr. Garratt; Codicote; Sharp's Duke of Wellington, Miss Willoughby, Russell's Incomparable, Wood's Agrippina, Wood's Queen Victoria, Wood's Pamela, Wood's Miss Wilkinson, Wood's Triumph, Wood's Duke of Manchester, Lord Hill, Miss Neville, Princess Amelia.

Ditto, 6 best...1. Mr. Wm. Pope, Biggleswade; Miss Willoughby, Incomparable, Miss Neville, Miss Desborough, Mrs. Lenton, Wood's Queen Victoria. 2. William Lucas, Esq. Hitchin.

Ditto, 4 best...1. Wm. Curling, Esq. Hitchin; Duke of Manchester, Giddins's Troubler, Wood's Queen Victoria, Wood's Agrippina. 2. Joseph Sharples, Esq. Hitchin.

Ditto, best single specimen...Mr. Wm. Pope, Russell's Incomparable.

Ditto, best seedling...Mr. Barringer, Barringer's Fairy Queen.

July 30. KILMARNOCK HORTICULTURAL EXHIBITION.—The members of this Society met for competition in the Turf Inn Assembly Rooms. The articles brought forward were of excellent quality, and did great justice to the exertions of the competitors. The judges, Messrs. James Young, John Anderson, James M'Lymont, and James Wyllie, on Flowers; and Messrs. John Brown, George Brown, James Pattison, Basil Mitchell, and James Hamilton, on Fruit and Vegetables, after a careful inspection, awarded the competitors to stand as under, viz.:—

CUT FLOWERS.

Best 5 Pinks, Cook's Seedling, Suwarrow, King, Maggie, and Queen Adelaide (2 competitors)...John Brown, Esq., of Laurel Bank.

Best collection of Garden Roses (2 competitors)...Mr. John Ingram, gardener, Treesbanks.

Best 5 Climbing Roses (2 competitors)...Mr. Ingram.

Best 3 China Roses...Mr. John Richmond, gardener, Mount.

Best 5 Seedling Pansies, sown 1841 (2 competitors)...Mr. Robert Highet, gardener, Assloss.

Best 13 Pansies, named sorts (2 competitors)...Mr. James Murray, gardener, Lainshaw, with Amato, Diomede, Queen Victoria, Queen, Eliza, Lord Douglas, Lady Douglas, Cuttie Sark, &c. &c.

Best collection of Pansies...Mr. Highet.

PLANTS.

Best 5 Hardy Annuals, Nemophylla Atomaria, Zebra Mallow, Clarkia Alba, &c. (2 competitors)...Mr. Murray.

For the 3 most rare Herbaceous Plants, Stachys Coccinea, Pentstemon Gentianoides Coccineus, and Aconitum Versicolor...Ditto.

For the 9 most showy Herbaceous Plants (2 competitors)...Ditto.

Best collection of Herbaceous Plants (2 competitors)...Ditto.

Best 3 Greenhouse Shrubs, in pots, Crassula Coccinea, Dipsacus Puniceus, and Coronilla Glauca...Mr. Richmond.

Best collection of Greenhouse Plants, Ditto.

Best 3 Dahlias, Captain Boldero, Fireball, and Virgin Queen (5 competitors)...Mr. Highet.

Best 3 Verbenas...Mr. Richmond.

Best 3 Cockscombs (2 competitors)...Mr. Murray.

Best 3 Balsams...Mr. Richmond.

Best 5 Heaths, in pots, Linnæoides, Pregnans, Coccinea, Daphneflora, and Viridiflora... Ditto.

Best 3 Fuchsias, fine grown specimens of Standishii, Elegans Superba, and Fulgens Multiflora...Mr. Brown.

Best 5 Geraniums, in pots, fine specimens of Sylph, Garth's Perfection, Alicia, Acinable Splendens, and Davidson's Scarlet...Mr. Richmond.

Best collection of Geraniums...Mr. Richmond.

July. STAMFORD AND NEIGHBOURHOOD FLORAL AND HORTICULTURAL SOCIETY.—In spite of the weather, the Show was the reverse of a small one, and did not shrink in comparison with any provincial exhibition with which we are acquainted. We feel confident that a real florist and horticulturist, and all interested in the success of such pursuits, would leave the Exhibition-rooms at Standwell's Hotel satisfied that this Society must still enjoy the public favour, when it prevailed against such an enemy as it experienced in the weather.

PRIZES.

Best Amateur's stand of Ten Carnations and Picottees...Mr. T. Banks; Martin's Prince George, Martin's Princess Victoria, Conductor, Victoria, Martin's Superb, Wilson's William the Fourth, Jerrod's Lusette, Wood's William the Fourth, Queen of Sheba, Herd's Romeo.

Second best ditto...Mr. Stevenson; Martin's Coronna, Seedling, Boothman's Princess Victoria, Yeoman's Duke of Rutland, Rosa Matilda, Huntsman, Lord Lyndhurst, Wilson's William the Fourth, Village Maid, Yeoman's Patroness (R. Christian, gardener).

Best pair of Scarlet Bizarres...Mr. Mills; Ely's Jolly Dragoon, Hepinworth's Leader.

Best pair of Scarlet Flakes...Mr. Phillips; Vulcan (M. Broughton, gardener).

Best pair of Purple ditto...Capt. Chadwick; Martin's Apollo (T. Haslehurst, gardener).

Best pair of Rose ditto...Mr. Stevenson; Yeoman's Patroness, Sir George Crewe.

Best pair of heavy-edged Red Picottees...Mr. J. Mills; Comet, Hutton's Will Stukely.

Best pair of light-edged Red ditto...Rev. H. Chaplin; Martin's Mars, Princess Victoria (James Frisby, gardener).

Best pair of heavy-edged Purple ditto...Mr. Phillips; Miranda, Britannia.

Best pair of light-edged...Mr. James Simpson; Duchess of Kent.

Best pair of Rose ditto...Rev. H Chaplin; Beauty of Hemmingford.

Best pair of Yellow Picottees...Mr. John Mills; Martin's Queen Victoria.

Best Seedling Picottee in any class...Mr. Stevenson.

Best Collection of Hardy Flowers in Pots (not less than 10 varieties)...Mr. Phillips; Anchusa Italica, Pentstemon Gentianoides, Pentstemon Gracilis, Trichilium Cæruleum, Campanula Pyramidalis, Antirrhinum Alba, Chelone Barbata, Origanum Sypelina, Red Gauntlet Picottee (Mat. Broughton, gardener).

Best Collection of Greenhouse and Stove Plants (not less than 15 varieties)...Marchioness of Exeter; Crinum Pediculata, Lophosperum Spectabile, Thunbergia Lutea, Thunbergia Aurantiaca, Erithrina Crista-galli, Humœa Elegans, Thunbergia Alata, Lilium Speciosissimum, Erica Irbyana, Hœmanthus Coccinea, Fuchsia Magnificens, Fuchsia Inflata, Fuchsia Chandeleria, Calceolaria General Grosvenor, Coxcomb.

Second best ditto...Countess of Lindsey; Diplacus Puniceus, Siphocampylus Bicolor, Fuchsia Congiflora, Fuchsia Fulgens, Fuchsia Reflexa, Fuchsia Globosa Major, Fuchsia Chandeleria, Fuchsia Splendida, Crassula Coccinea, Thunbergia Gracilis, Geranium Village Maid, Coronation, Fanny Garth, Salvia Patens, Erica Mannosa, Erica Vestita, Calceolaria Magniflora, Calceolaria Grandis, Rhexa Angustifolia, Gloxinia Speciosa, Vinca Alba, Justicia Carnea, Verbena Barnsii, Begonia Uniformis, Alstrœmeria Peregrina (J. M'Pherson, gardener).

Best Collection of Double Hollyhocks...Mr. Phillips.

Best 6 varieties of Dahlias in Pots...Mr. J. Mills; Springfield Rival, Suffolk Hero, Fireball, Douglas's Glory, Barratt's Hero of Wakefield, Glory of the West.

Best Collection of Balsams (not less than 8), very fine...General Johnson (William Stone, gardener).

Second best ditto...Lord Carbery.

Best Bouquet from one Garden...Mrs. Hopkinson.
Second best ditto...Mrs. Roberts.
Best Device in Flowers...Mrs. Eaton.
Second best ditto...Mrs. Roberts.

COTTAGERS' PRIZES.

Best Nosegay from one Garden...Mrs. Golding. Second best ditto...Mrs. Pilmore.
The Cottagers' prizes were, with great propriety, chiefly given for vegetables.

EXTRAS.

Hollyhocks...Lady Lindsey.
Two Pines growing from one Stem (in a pot)...General Johnson.
Fuchsia Fulgens...Mr. Mark Jackson. Collection of Stocks—Mr. Parker.

August 4. LEEDS CARNATION AND PICOTTEE SHOW.—The above open Show was held in the Zoological and Botanical Gardens, Leeds. Award of prizes:—

Best stand of 12 Dissimilar Blooms, open to all...1. Messrs. Ely and Son, for Ely's Mrs. Horner, Ely's Lady Howdon, Seedling No. 13, Seedling No. 66, Ely's Bright Venus, Duke of Leeds, Ely's Mr. Grainger, Ely's Mango, Seedling No. 70, Seedling No. 22, Ely's Lady Ely, Hudson's Miss Thornton. 2. Mr. Wm. Chadwick, for Ely's Bright Venus, Jackson's Delight, Mark Antony, Thwait's Gold Hero, Walmsley's William IV., Lady Harewood, Duke of Leeds, Warle's Lord Hill, Seedling No. 7, Ely's Duke of Bedford, Ely's Captain Ross, Ely's Complete. 3. Mr. John Kearsley, for Ely's Mrs. Bentley, Banton's Fairy Queen, Ely's Captain Ross, Ely's Alicia, Ely's Mango, Ely's Duke of Lancaster, Martin's Queen Victoria, Lady Grey, Euclid, Seedling No. 18, Seedling No. 16, Seedling No. 17.

CARNATIONS.

Scarlet Bizarres...1. Leader, Mr. Chadwick. 2. Duke of Leeds, ditto. 3. Duke of Lancaster, Mr. Kearsley. 4. Tallyho, ditto. 5. Lord Bagot, Mr. Clark. 6. Walmsley's William IV., Mr. Chadwick.

Pink Bizarres...1. Ely's William Caxton, Messrs. Ely and Son. 2. Seedling No. 19, ditto. 3. Ely's Mr. Gully, Mr. Kearsley. 4. Ely's Alicia, ditto. 5. Seedling, Mr. Ripley. 6. Ely's Alicia, Mr. Kearsley.

Scarlet Flakes...1. Marquis of Granby, Messrs. Ely and Son. 2. Cherry Cheek Patty, Mr. Chadwick. 3. Firefly, Messrs. Ely and Son. 4. St. George, Mr. Chadwick. 5. Ely's Captain Ross, Mr. Kearsley. 6. Lady Sarah, Mr. Chadwick.

Purple Flakes...1. Euclid, Mr. Kearsley. 2. Ely's Mango, ditto. 3. Unknown, Mr. Chadwick. 4. Miss Thornton, Messrs. Ely and Son. 5. Beauty of Woodhouse, ditto. 6. Ely's Lady Hewley, Mr. Chadwick.

Rose Flakes...1. Ely's Lady Ely, Messrs. Ely and Son. 2. Seedling, Mr. Ripley. 3. Hudson's Lady Flora Hastings, Messrs. Ely and Son. 4. Thwait's Gold Hero, Mr. Chadwick. 5. Hudson's Lady Flora, Messrs. Ely and Son. 6. Ely's Lovely Ann, ditto.

Red, heavy-edged...1. Marc Antony, Mr. Chadwick. 2. Ely's Mrs. Horner, Messrs. Ely and Son. 3. Ely's Mrs. Bentley, ditto. 4. Heeson's Crispin, Mr. Chadwick. 5. Smith's Nonsuch, Mr. Kearsley. 6. Lady Talbot, W. R. Gatcliff, Esq.

Purple, heavy-edged...1. Seedling No. 4, Messrs. Ely and Son. 2. Britannia, Mr. Kearsley. 3. Queen Victoria, Messrs. Ely and Son. 4. Seedling No. 7, Mr. Chadwick. 5. Jackson's Delight, ditto. 6. Miss Emma, Mr. Kearsley.

Red, light-edged...1. Ely's Mrs. Horner, Messrs. Ely and Son. 2. Ely's Lady Howden, ditto. 3. Nymph of the Nore, Mr. Chadwick. 4. Ely's Complete, ditto. 5. Warle's Beauty, Messrs. Ely and Son. 6. Don Juan, Mr. Kearsley.

Purple, light-edged...1. Seedling, Messrs. Ely and Son. 2. Lady Harewood, Mr. Chadwick. 3. Miss Emma, Mr. Kearsley. 4. Ely's Vanquisher, ditto. 5. Fairy Queen, ditto. 6. Seedling No. 22, Messrs. Ely and Son.

Rose...1. Seedling, Mr. Kearsley. 2. Ditto, Messrs. Ely and Son. 3. Miss Hall, ditto. 4. Fanstrane, Mr. Chadwick. 5. Seedling, Messrs. Ely and Son. 6. Ditto, ditto.

Yellow...1. Duchess of Kent, Messrs. Ely and Son. 2. Queen Victoria, ditto. 3. Duchess of Kent, ditto. 4. Queen Victoria, ditto. 5. La Conquerante, ditto. 6. Le Beau, ditto.

Selfs...1. Ely's Purity, Messrs. Ely and Son. 2. Charles XII., Mr. Scholefield. 3. Seedling, Mr. Chadwick. 4. Ditto, Messrs. Ely and Son. 5. Ditto, ditto. 6. Ditto, ditto.

Best stand of 8 Dissimilar Blooms, open to Amateurs and Gentlemen Gardeners only... 1. Mr. John Ripley, for Ely's Lady Ely, Seedling, British Queen, Marc Antony, Seedling, Ely's Sir Robert Peel, Ely's Captain Ross, Jackson's Delight. 2. Ditto, for Ely's Mrs. Hemmingway, Beauty of Woodhouse, Leader, Gill's Enchantress, Ely's Dr. Hook, Ely's Captain Ross, Hardy's Catherine, Millwood's Premier. 3. W. R. Gatcliff, Esq., for Duke of Bedford, Charles X., Warle's Beauty, Nymph of the Nore, Ely's Mango, Vespasian, Ely's Bright Venus, Marc Antony.

Judges, Messrs. Joseph Barstow and Wm. Dobbings, Leeds; and Mr. Jackson, Huddersfield.

August 4. **Nottingham Floral and Horticultural Society.**—The second Meeting was held on Wednesday, the 4th of August, for the exhibition of Carnations, Stove, Greenhouse, and Herbaceous Plants, Ericas, and Hardy Shrubs, and specimens of all Fruit and Vegetables in season. The Carnations were very fine. The stove and other plants from the gardens of G. Walker, Esq. and F. Wright, Esq. attracted great attention. The greenhouse plants, in consequence of the lateness of the season, were not so abundant as usual. The fruit was arranged in luxuriant profusion, and the quality most exquisite, particularly the pines, grapes, &c. from the gardens of G. Walker, Esq., F. Wright, Esq., and J. Milnes, Esq.

CARNATIONS.

First Pan...Mr. Pickering; Hufton's Patriarch, Paul Pry, Rob Roy, Mrs. Pickering, Princess Charlotte, Derby Willow, Lady Peel, Hufton's Nehemiah, Pickering's Harriet.

Second...Mr. Beardsley; Hufton's Patriarch, Lord Milton, Earl of Leicester, Cottage Girl, Princess Charlotte, Prince George, Bowley's Ann, Nehemiah, Madame Nivier.

Third...Mr. Wood; Leader, Lord Milton, Marquis of Granby, M. Walker, Millwood's Premier, Boothman's Victoria, Hufton's Minerva, Smith's Nonsuch, Wood's Victoria.

Fourth...Mr. Taylor; Patriarch, Paul Pry, Ringleader, Fair Flora, Bellerophon, Boothman's Victoria, Lee's Mary, Derby Willow, Sharp's Criterion.

Seedlings...Mr. Robinson.

Scarlet Bizarres...Unknown, Mr. Pickering; ditto, ditto; ditto, Mr. Wood; Leader, Mr. Beardsley; Patriarch, Mr. Pickering; Seedling, ditto.

Crimson Bizarres...Paul Pry, Mr. Beardsley: Wood's William IV., Mr. Taylor; Paul Pry, Mr. Pickering; Tallyho, Mr. Beardsley; Paul Pry, Mr. Pickering.

Scarlet Flakes...Kingleader, Mr. Pickering; Madame Mara, Mr. Taylor; Wood's Comet, ditto; Madame Mara, Mr. Pickering; Wood's Comet, Mr. Taylor; Madame Mara, ditto.

Purple Flakes...Bellerophon, Mr. Beardsley; Turner's Charlotte, Mr. Pickering; Mungo Park, ditto; Bellerophon, Mr. Beardsley; Princess Charlotte, Mr. Pickering; Alfred the Great, Mr. Beardsley.

Rose Flakes...Mrs. Pickering, Mr. Pickering; ditto, ditto; Sarah, Mr. Wood; Mrs. Pickering, Mr. Pickering; ditto, ditto; ditto, ditto.

PICOTTEES.

Heavy-edged Red...Bowley's Ann, Mr. Beardsley; Derby Willow, Mr. Pickering; Little Wonder, ditto; Derby Willow, ditto; ditto, ditto; ditto, ditto.

Light-edged Red...Miss Bacon, Mr. Taylor; Sharp's Criterion, ditto; Bowley's Ann, ditto; Miss Bacon, Mr. Taylor; Seedling, No. 1. Mr. Pickering.

Heavy-edged Purple...Clegg's Bloomsbury, Mr. Pickering; Boothman's Victoria, Mr. Beardsley; Nehemiah, Mr. Pickering; Seedling, Mr. Pickering; Boothman's Victoria, Mr. Beardsley; Seedling, Mr. Pickering.

Light-edged Purple...Harriet, Mr. Pickering; Seedling, Mr. Beardsley; Elizabeth, ditto; H. Isabella, ditto; Emily, ditto; Seedling No. 1, ditto.

PLANTS.

Best Stove Plant, Clerodendrum Speciossissima...G. Walker, Esq.
Second ditto, Vinca Rosea...ditto.
Greenhouse, Nerium Splendens...Messrs. Needham and Green.
Second, Crassula Coccinea...Mr. Spencer.
Calceolaria Atkinsonia...Messrs. Needham and Green.
Erica Eximea...F. Wright, Esq.
Second ditto ditto...ditto.
Six Herbaceous Plants...Mr. Robinson.
Collection of Cut Flowers...Mr. Wood.
Second ditto...Mr. Robinson.
Fuchsia...Mr. Spencer.
Second ditto...Messrs. Needham and Green.
Basket of Cut Flowers...Mr. Robinson.

EXTRA PRIZES.

Collection of Orchideous Plants, Cattleya Crispa, Cattleya Loddigesii, Cattleya Harrisonia...G. Walker, Esq.

Collection of 3 Greenhouse Plants, Statice Puberula, Geranium Tricolor, Bigonia Marginia...F Wright, Esq.

Collection of Three Herbaceous Plants, Pentstemon Gentianoides, Phlox Brilliant, Phlox Rosea...Mr. Spencer.

Second ditto, Œnothera Fruticosa, Anterrhinum Alba, Aconitum Versicolor...Mr. T. Wright.

Three German Stocks...ditto.

Two Vines in pots, in bearing state...Mr. Hopcroft.

The Botanic Garden for 1840, a Prise given by B. Maund, F.L.S. for the best Amateur's Collection of 20 Species of Hardy Annuals, or Perennial Herbaceous Plants or Shrubs, was awarded to J. Nevill, Esq. for Draklai cephalum, Chelone Barbata, Brachycome Iberridifolia, Delphinium Barlowii, Cistis Rosea, Pentstemon Gentianoides, China Superb Rose, Campanula Sarmatica, Statice Tartarica, Flox Alba Multiflora, Aconitum Grandiflorum, Anterrhinum White, Coreopsis Lanceolata, Collinsia Elegans, Pinum Flavum, Potentilla Thomassii, Nolana Atripiicifolia, Indian Pink, Schizanthus Pinnata, White Rocket Candy Tuft.

Best Pan of 20 Pansies, open to Dealers and Amateurs...Mr. F. Wood.
Second ditto...Mr. S. Shilton.
Pan of 20 Pansies, amateurs only...ditto.
Second ditto...Mr. S. Wright.
Third ditto...Mr. J. Nevill.
Pan of 12 Pansies, amateurs only...Mr. S. Shilton.
Seedlings, 1, 2, 3, 4, 5, 6...ditto.

August 4. Burton-upon-Trent Horticultural Society.—The fourth Exhibition took place on Wednesday, August 4, when there were exhibited, amongst other things, a choice selection of Dahlia Blooms, which were considered the finest ever exhibited here so early in the season. There was a scarcity of Greenhouse Plants, but the show of Carnations and Picottees far exceeded those previously shown. In addition to the regular show of Carnations for competition, there was exhibited a pan of beautiful Carnations and Picottees from Mr. Willmer, of Sunbury.

The Floral prizes were awarded as follows:—

PLANTS.

Six Greenhouse Plants and six best Fuchsias, Mr. Belcher; Calceolaria, Mr. Allsopp; Erica, Mr. Holmes; Hardy Herbaceous Plant, Campanula Carpatica, Mr. W. Appleby; Tender Herbaceous, Statice, Mr. Belcher; Light Geranium, Mr. Allsopp; Dark and Shaded, Mr. W. Appleby; Hardy Shrub, Hydrangea, Mr. Belcher; Design of Flowers, the Earl of Chesterfield; Marigolds, Mr. Wroughton; Stocks, Mr. Allsopp; Cockscomb, Mr. Bass; Tender Annual, the Earl of Chesterfield. Extra Prize, Clethra, Mr. Belcher.

CARNATIONS.

Scarlet Bizarre—1st Seedling, 3d ditto, Mr. W. Appleby; 2d, Redfern's William the Fourth, Mr. Allsop; 4th, Walmesley's William the Fourth, Mr Lathbury.

Crimson Bizarre...1st Seedling, 4th, Toon's Conductor, Mr. Allsopp; 2d, Paul Pry, 3d, Squire Ray. Mr. Green.

Scarlet Flake...1st, Ringleader, Mr. Green; 2d, Marquis of Granby, Mr. Holmes; 3d, Rob Roy, Mr. Allsopp; 4th, Plummer's Waterloo, Mr. Allsopp.

Purple Flake...1st. Premier, 3d, Queen of Sheba, Mr. Holmes; 2d, Major Cartwright, Mr. Allsopp; 4th, Village Maid, Mr. Green.

Rose Flake...1st Coronation, Mr. Green; 2d, Queen of Roses, Mr. Allsopp; 3d, Eason's Elizabeth; 4th, Lovely Ann, Mr. Holmes.

PICOTTEES.

Dark Purple...1st, Zimmerman, Mr. Holmes; 2d, Heath's Elizabeth, Mr. Allsopp.
Light Purple...1st, Shark's Queen Victoria, Mr. Appleby; 2d, Isabella, Mr. Allsopp.
Dark Red...1st, Red Rover, Mr. Green; 2d, Willow, Mr. Lathbury.
Light Red...1st, unknown, Mr. Bass; 2d, Mrs. Bentley, Mr. Turner.

DAHLIAS.

Pan of twelve, Mr. Lathbury; ditto of eight, Mr. Belcher; ditto of six, Mr. Wroughton; ditto of four, Mr. Holmes.

August 5. Shrewsbury Florist and Horticultural Society. The Exhibition was held on Thursday, August 5. The numerous and very excellent assortment of Exotics sent by Mr. Bigg received the thanks of the Committee. The following are the Prizes awarded for Carnations and Picottees:—

CARNATIONS.

Best Pan...Duke of Devonshire, Lucretia, British Queen, Booth's Conquest, Queen of England (Picottee), Drusilla; F. Harries, Esq.

Second Pan...Hepworth's Leader, Lucretia, Elliott's British Queen, Wollard's Queen Victoria, Groves's Conservative (Picottee), Hufton's Drusilla; Mr. T. Groves.

Best Bizarre (S. P.)...Duke of Devonshire, F. Harries, Esq.

Best Flake (S. P.)...Marquis of Granby, ditto.

Scarlet Bizarre...1. Haidee, Mr. T. Groves; 2. Woodridge's King, F. Harries, Esq.; 3. Lord Bagot, Mr. T. Groves; 4. Hepworth's Leader, ditto; 5. Duke of Devonshire, F. Harries, Esq.; 6. Hufton's Patriarch, ditto.

Crimson Bizarre...1. Lucretia, F. Harries, Esq.; 2. Venus, ditto; 3. Duke of Bedford, ditto; 4. Rainbow, Mr. Millman; 5. Seedling, No. 6, W. Bayley, Esq; 6. Wigley's Royal Princess, ditto.

Scarlet Flake...1. Red Rover, Mr. T. Groves; 2. Seedling, No. 85, W. Bayley, Esq.; 3. Groves's Lady Jenkins, Mr. T. Groves; 4. Taylor's Festival, ditto; 5. Rob Roy, ditto; 6. Seedling, No. 15, W. Bayley, Esq.

Purple Flake...1. Elliott's British Queen, Mr. T. Groves; 2. Squire Clarke, W. Bayley, Esq.; 3. Queen of Sheba, F. Harries, Esq.; 4. Holway's Wonder of the World, Mr. T. Groves; 5. Hepworth's Elizabeth, ditto.

Rose Flake...1. Pugh's Rosina, F. Harries, Esq.; 2. Seedling, 31, Caroline, W. Bayley, Esq.; 3. Hyron's Queen, Mr. T. Groves; 4. Princess Clementine, ditto; 5. Pugh's Paganini, W. Bayley, Esq.; 6. Lady Peel, Mr. T. Groves.

PICOTTEES.

Best Pan...Morris's Emperor, Sir Thomas, Hufton's Drusilla, Queen of Violets, Marcus, Purcha's Granta; F. Harries, Esq.

Second Pan...Jessop's Sir William Middleton, Kirtland's Victoria, Groves's Little Wonder, Hufton's Drusilla, Kirtland's Sabina, Isabella; Mr. T. Groves.

White Ground (S. P.)...Drusilla, F. Harries, Esq.

Yellow ditto (S. P.)...Rosalie de Bohun, ditto.

Purple-edge...1. Hufton's Drusilla, Mr. T. Groves; 2. Pullen's Incomparable, F. Harries, Esq.; 3. Moonraker, ditto; 4. Seedling, No. 80, Mr. T. Groves; 5. Duchess of Bedford, F. Harries, Esq.; 6. Kirtland's Victoria, ditto.

Red...1. Parker's Sir Thomas, W. Bayley, Esq.; 2. Will Stukeley, ditto; 3. Martin's Prince George, ditto; 4. Little John, ditto; 5. Prince George, Mr. Millman; 6. Beauty of Hemingford, F. Harries, Esq.

August 5. EVERTON AND KIRKDALE FLORAL AND HORTICULTURAL SOCIETY. The Meeting of this Society, for the show of Carnations, Fruits, Plants, Vegetables, &c., took place on Thursday, August 5, in the spacious marquee, in the pleasure grounds belonging to the Derby Arms, Kirkdale; and whether, as regards the richness of the Show, or the attendance, was assuredly the most splendid and interesting that has hitherto taken place at the same ground, or, we may add, in any part of the north of England.

The Stove Plants were remarkably fine. Amongst them was Erythrina Herbacea, from C. S. Parker, Esq., Aigburth. The Ipomœa Tyranthyna, from Mr. Skirving's, a splendid plant lately introduced from Mexico, obtained the first prize.

The premier Greenhouse Prize was awarded to T. B. Molyneux, Esq., for a beautiful specimen of the Datura Arborea.

The Orchidaceous Papilio, or Butterfly Plant, attracted much attention. This rare variety of the plant, from Mr Skirving's, obtained the first prize. A specimen of the Fuchsia Corymbiflora, from the same successful grower, gained the first Greenhouse Prize. The Auricaria Imbricata, or Chili Pine, and the Auricaria Excelsa, a native of Norfolk Island, from the same grounds, were much admired. The latter, in its native country, attains a height of 150 feet.

There was shown by R. Leyland, Esq. a fine specimen of the Hoya Carnosa.

A splendid specimen of the Geranium, from Mr. Davies's, "bore off the bell" in this department of floriculture.

The Carnations were superior to those of any former show. The Pansies were also fine, including those of Mr. New. Some fine specimens were also shown by Mr. W. H. Goore.

In Heaths the first Prize was awarded to C. S. Parker, Esq.

The first Prize for Herbaceous Plants was gained by R. Leyland, Esq., for his Phlox Omniflora—a very fine specimen.

There was a beautiful bloom of Dahlias, considering the premature period of the year.

August 7. RIPON CARNATION AND PICOTTEE SHOW. Held at the Star Inn, on Saturday, August the 7th. The following prizes were awarded :—

CARNATIONS.

Premier Prize for the best Carnation of any colour...Seedling No. 34, Messrs. Ely and Son.

Scarlet Bizarres...1. Seedling No. 34, Messrs. Ely and Son. 2. Ditto No. 13. ditto. 3. Bartle's Superior, Mr. Thomas Harrison. 4. William IV., Messrs. Ely and Son. 5. Bartle's Superior, Mr. Thomas Harrison. 6. Ely's Jolly Dragoon, ditto.

Pink Bizarres...1. and 2. Seedling No. 270, Messrs. Ely and Son. 3. Paul Pry, Mr. Thomas Harrison.

Scarlet Flakes...1. Ely's Mr. Grainger, Messrs. Ely and Son. 2. Firefly, ditto. 3. Wilson's William IV., Mr. Thomas Harrison. 4. Marquis of Granby, Messrs. Ely and Son.

Purple Flakes...1. Ely's Mango, Messrs. Ely and Son. 2. and 3. Ditto, Mr. Thomas Harrison. 4. Ditto, Messrs. Ely and Son.

Rose Flakes...1. Ely's Lovely Ann, Messrs. Ely and Son. 2. Ely's Lady Ely, ditto. 3. Lucetta, Mr. Harrison. 4. Lady Milner, Mr. Harrison.

PICOTTEES.

Premium Prize for the best Picottee...Ely's Mrs. Horner, Messrs. Ely and Son.

Scarlet...1. and 2. Ely's Mrs. Horner, Messrs. Ely and Son. 3. Metcalf's Seedling, Mr. Thomas Harrison. 4. Seedling, ditto. 5. Ely's Mrs. Horner, Messrs. Ely and Son. 6. Metcalf's Seedling, Mr. James Harrison.

Purple...1. Seedling No. 4, Messrs. Ely and Son. 2. Ely's Grace Darling, ditto. 3, 4, and 5. Seedling, Mr. Thomas Harrison.

Yellow...1. La Conquerante, Messrs. Ely and Son. 2. Martin's Queen Victoria, ditto.

Selfs...1. Ely's Purity, Messrs. Ely and Son. 2. and 3. Seedling, Mr. Thomas Harrison. 4. and 5. Ditto, Mr. James Harrison.

Judges, Messrs. George Grayson, Wm. Hebdon, and Mr. Clark.

August 11. DONCASTER HORTICULTURAL SOCIETY.—The third Exhibition of the season was held on Wednesday, the 11th of August. Prizes awarded:—

PLANTS AND FLOWERS.

Best Orchideous Plants...1. Mr. R. F. Hall, Oncidium Flexuosum. 2. Ditto, Cattleya Forbesii.

Stove Plant...1. Ditto, Gloxinia Rubra. 2 and 3. Ditto, Bignonia Insignis, Sinningia Hallerii.

Greenhouse ditto...1. Dr. Scholfield, Gladiolus Floribundus. 2. Mr. R. F. Hall, Gnaphalium Eximium. 3. Mr. Robinson, Pimelea Silvestris.

Cactus...Ditto.

Exotic Climber...Ditto, Hoya Carnosa.

Blush Pelargonium...Ditto, Lowndes's Perfection.

Pink ditto...Ditto, Vivid.

Various ditto...Ditto, Helen of Troy.

Rose ditto...Ditto, Foster's Rosea.

White ditto...Ditto, Alexandrinum.

Crimson ditto...Ditto, Beauty of Ware.

Striped ditto...Ditto.

Lilac ditto...Ditto, Lady of the Lake.

Purple ditto...G. C. Walker, Esq.

Crimson-purple ditto...Mr. Robinson, Concessum.

Erica...1. Mr. R. F. Hall, Infundibuliformis. 2. Ditto, Cerinthoides Major.

Fuchsia...1. Mr. Robinson, Grandiflora Maxima. 2. Lady Maclean, Richardsonii. 3. Dr. Scholfield, Grandiflora. 4. G. C. Walker, Esq., Globe Major.

Mimulus...1. Ditto. 2. Ditto.

Hardy Shrub...Miss Chivers, C. Ross, gardener.

Herbaceous Calceolaria...1. Mr. Robinson. 2. G. C. Walker, Esq. 3. Mr. Robinson.

Shrubby ditto...1. Ditto. 2. Mr. J. Foulston. 3. Mr. Robinson.

Pan of 6 Hollyhocks...H. Cooke, Esq.

British Plant...Lady Maclean.

Hardy Bouquet...D.. Scholfield.

Annual...1 and 2. Ditto.

Scarlet Stock...Ditto.

White ditto...Lady Maclean.

Purple ditto...G. C. Walker, Esq.

Balsam...1. Mr. R. F. Hall. 2. Lady Maclean.

CARNATIONS.

Best Pan of 12 Carnations or Picottees...Mr. Thorpe.

Pan of 6 ditto...Ditto.

Scarlet Bizarre...1. Ditto, Leader. 2. Ditto, Duke of Leeds.

Pink ditto...1. Ditto, Independent. 2. Ditto, King Alfred.

Scarlet Flake...1 and 2. Ditto.

Rose Flake...1. Ditto, Surpass Perfection. 2. Mr. J. Foulston, Duchess of Devonshire.

Purple ditto...1. Mr. Thorpe, Invincible. 2. Ditto.

Red Picottee...1. Mr. J. Foulston. 2. Mr. Thorpe, Marris's May.

Purple ditto...1. Mr. J. Foulston, Gill's Flora. 2. Mr. Thorpe.

Yellow ditto...Mr. Thorpe, Martin's Queen Victoria.

Self...1. Mr. J. Foulston. 3. Mr. Thorpe.

DAHLIAS.

Best Scarlet...G. C. Walker, Esq., Countess of Pembroke.

White...Mr. Thorpe.

Rose...H. Cooke, Esq., Marquis of Lothian.

Anemone...Ditto.

Globe...Mr. Thorpe.

Red...Ditto.

Spotted...Lady Cooke, Duke of Sussex.

Striped...Ditto, Hon. Mrs. Harris.

Dark...H. Cooke, Esq., Middlesex Rival.

Purple...Ditto, Hope.

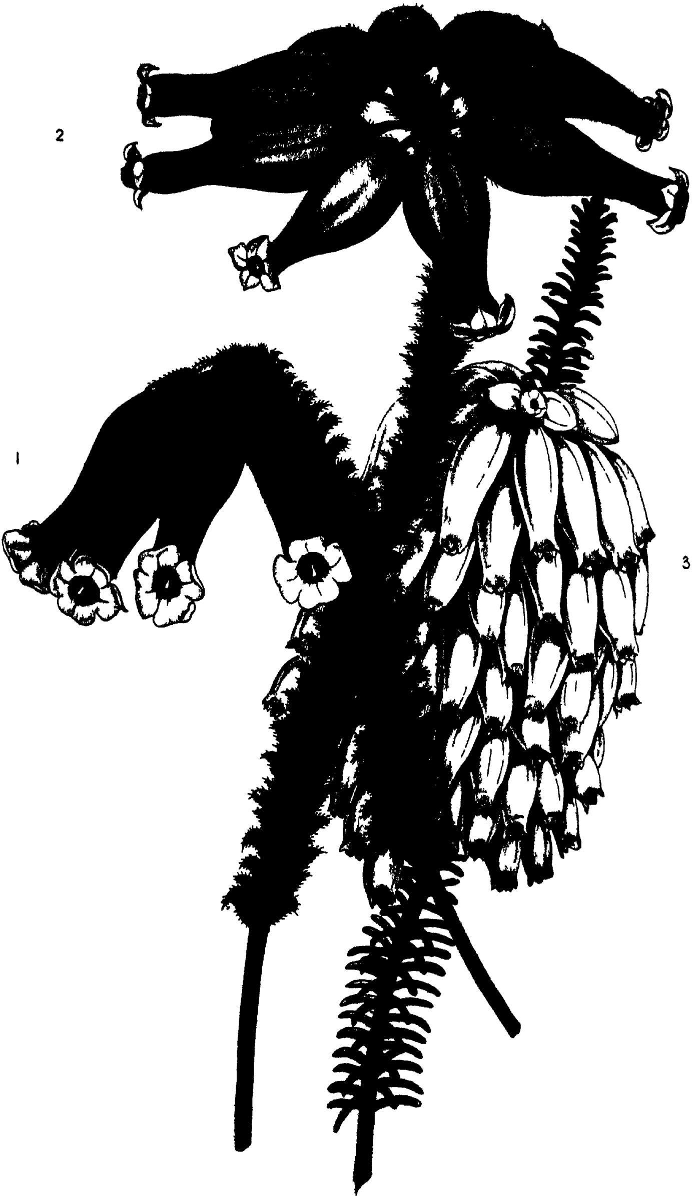
Orange...Mr. J. Foulston.

Yellow...H. Cooke, Esq.

Shaded...Mr. Thorpe.

Crimson...Mr. J. Foulston, Knight's Victory.

Lilac...Lady Cooke, Lilac Perfection.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THE

FLORIST'S JOURNAL.

OCTOBER 1, 1841.

CULTIVATION OF THE GENUS ERICA.

BY MR. DON.

THE genus *Erica*, consisting of the true Heaths, is a most extensive, and exceedingly beautiful one; and many of the species are of easy culture. They may be readily grown as window flowers, as they require no artificial heat, but are only to be protected from severe frosts and cutting winds, which last are very injurious to them. Cold, if not so low as freezing, does them no harm whatever; and thus, by attention to the few directions we shall give, the culture of them is a very simple process. At the same time, there is no genus of plants which gives so much beauty to the greenhouse or the window as well-chosen Heaths.

The only circumstance which destroys these plants is allowing the mould to be always wet about them. The plan which I recommend to those who intend to grow them in windows, is to put round the outside of each pot an inch and a half thick of *sphagnum*, or common bog moss; and if this is frequently moistened, it will prevent the necessity of giving too much water inside the pots. A little green moss should be placed over the top of each pot, and no water should be given till this moss is removed, and the mould examined, and then only when the mould appears very dry. If this is the case, the pots should be filled up with water till the mould is wetted throughout; after which the green moss should be replaced.

In potting Heaths, I should recommend shallow pots; and for large plants the pots should be still shallow, but very wide. The proper mould in which to grow them is turfy peat well rotted, with rotted manure, leaf mould, coarse sand; and the addition of a little light coarse mould will do no harm. This compost should be thrown up together for twelve months before it is used; but I do not like the plan of using new peat brought from the common, which is too frequently done. Those cultivators who cannot get proper peat should use instead of it, leaf mould, well rotted manure, light loam, and coarse sand, which will answer as well as peat. None of the compost ought to be sifted, but it should be put in the pots in as dry a state as possible. In my opinion, the sifting of mould is most destructive to the health of plants; for the mould being fine, the roots also become fine in their texture, and the mould is easily soddened when they get a little too much water,—which would not be the case if the plants were potted in very rough mould. There is another circumstance which is very injurious to Heaths, though it also frequently occurs under the management of unskilful cultivators. It is the exposure of the pots to the scorching rays of the sun, or to cold drying winds, both of which have a most pernicious effect. Instead of this, the *pots* should be placed in a situation where neither sun nor wind can have access to them; because, if the roots are thus kept cool and moist, the hottest rays of the sun have no effect on the branches; and the plants, with the pots so protected, would look strong, green, healthy, and vigorous, and they would not require so much water as is necessary when the pots are exposed,—which frequent watering is very injurious to plants with tender roots. I am certain that nothing is more destructive of Heaths than pouring cold water in or on the pots when heated by the sun. This gives the root a severe check, which is in time communicated to the whole plant. This is one cause why we often see Heaths looking so unhealthy, and many of the very finest species are said to be difficult of culture from this cause alone.

In propagating, the finer Heaths, almost the whole of which are natives of the Cape of Good Hope or the proximate parts of Southern Africa, are best multiplied by cuttings: the best plan for making sure that these cuttings will strike root, is to take them off the half-ripened wood. They should be from an inch to an inch and a half in length, cut clean at the lower extremity with a sharp knife; and all the lower leaves should be carefully taken off. The mould in which to strike the cuttings should be peat, sand, and leaf mould, but the greater part should be sand. The situation to strike them in should be cool and rather moist, and where the sun can scarcely reach them, as this prevents both the necessity and the injury of their being shaded. When put in, the cuttings should be covered with hand glasses for at least twelve months, and then the plants will be strong enough for putting into thumb pots singly. When this is done, they should be placed in a pit or frame, and frequently repotted, so that they may never get stunted. As they grow, the tops should be taken off, in order to make them as bushy as possible; for if Heaths once get tall and naked, they will never afterwards make fine plants. I need hardly add that the cuttings must be carefully protected from frost.

As the species amount to considerably more than five hundred, exclusive of varieties, an account of the whole would be rather a tedious matter; therefore I shall restrict myself to the three that are figured in the plate, all of which are very handsome plants.

Erica Bowieana is a handsome plant and full flowerer. The flowers are white and ventricose, and they come out near the tops of the shoots in twos and threes together, and form a sort of whorl round the shoot. The involucrum consists of two white leaves; the leaves of the calyx are ovate, somewhat cordate, and pointed. The calyx is composed of four parts; and the corolla consists of one piece divided into four at the apex. The peduncle is half an inch long, and slender, and the flowers droop. This species, when properly treated, flowers from March to October, and it answers well as a window plant. It is a native of the Cape of Good Hope, and was introduced into this country in 1816.

Erica aristata is a beautiful and rather scarce species, and an abundant flowerer. The flowers are crimson, the leaves thick and fleshy, beautifully ciliated at the edges; and the apex of the leaf has a slender point, or awn, from which the specific name is derived. The flowers are ventricose, and come out near the tops of the shoots, being almost capitate. It flowers from March to October, is a native of the Cape, and was introduced in 1801.

Erica tricolor superba is a very handsome species, somewhat like *Aristata;* but the leaves are broader and thinner, and the cilia on the leaves more slender. The arista on the apex of the leaf is also longer, much more slender, and of a dark brown colour, somewhat waved. The calyx is composed of four leaves, rather broader at the base than the common leaves of the stem, but not otherwise easily distinguishable. The peduncles are short, so that the flowers stand upright: they are ventricose, and the apex is of three colours, red, orange, and green. It is a native of the Cape, and was introduced into this country in 1836, though another variety of *Tricolor* was introduced in 1803. This one flowers from May to February; but there are many varieties, all handsome, and distinct from each other, yet so resembling *Aristata*, that *Aristata* may be either a variety of *Tricolor*, or *Tricolor* a variety of *Aristata*.

P. N. D.

Tooting Nursery.

ON THE CULTIVATION OF CHRYSANTHEMUM.

BY MR. R. PLANT.

THE Chrysanthemum is so generally admired as to be found in every collection, and consequently requires no encomium here; yet, notwithstanding, they are too often met with under the semblance of a bunch of dried sticks, with a few ill-looking leaves scattered thinly on their summits.

But most likely a few plain practical remarks will prove of more value than any critique. I will at once proceed with my routine of culture. To begin with a point of the most importance, namely, propagation; for this, I always prefer cuttings to any division of the root. I take them off about the first week in May, cut them to about six inches in length, and strike them under hand lights on any warm border, observing to mix a little white sand with the soil. They require shading for the first week; let them remain till they are thoroughly rooted, sprinkling them occasionally with a fine rose-pot; then pot them in a mixture of about two-thirds fine turfy loam, and the remaining part well rotted leaf mould, using forty-eight sized pots. They require frequent waterings, and this I always do when the sun is shining on them; for though very injurious to most other plants, it will be found very beneficial to these. They should now be placed in an open situation out of doors, there to remain till the end of September, at which time they are removed to the greenhouse to perfect their blooms. While standing out of doors they should not be placed too thickly, or they are very likely to lose the lower leaves. As the blooms appear they should be thinned, not allowing them to expand more than two or three flowers on each plant; they require the same treatment while in the house with the plants they are placed amongst. When done blooming they may be removed to a back part of the house or a shed, as they only require a partial protection from severe frost; as soon as the weather breaks they may be placed out of doors again till the season for propagating arrives. I then turn them out of pots, and remove all suckers, which generally supply me with cuttings for the next season; the old plants are then repotted into pots a size larger than those used before, in the same kind of earth, and cut down to within two inches of the earth: these break out and make fine bushy plants. The shoots as they appear should be thinned, leaving three only; subject them to the same treatment as before, and this, the second season, the plants will be seen in perfection. I keep them till the third week in May for the sake of cuttings, and then turn them into the flower borders, where they should have a warm situation and be kept thin of wood. It is a great pity the Chrysanthemum is so difficult to seed in this kingdom, as we should then, in all probability, have as many and as fine varieties as those obtained from Calceolarias. I have occasionally gained a small quantity, but am supplied plentifully from the continent and the island of Guernsey. To raise plants from seed, it should be sown as soon as obtained, in shallow pans, in sandy loam, and placed on a shelf in the greenhouse, or what is better, in a very mild hot bed. Harden the plants by degrees; the after treatment is the same as recommended above. I may here observe, this seed sometimes will lie a long time in the earth, so that the pans should be kept, though apparently all the plants may have been potted from them.

PHILOSOPHY OF FLORICULTURE.

ON THE SEEDING OF CULTIVATED FLOWERING-PLANTS.

The obtaining of fine flowers, or indeed the cultivation of plants for any one purpose, is always procured at the sacrifice of some of those properties which are perfect and exactly balanced when the plants are growing in their native localities, and left undisturbed by art. Sometimes one property of the plant gives way, and sometimes another; and the subject has not been so thoroughly studied as to enable even the most experienced cultivator to say beforehand, what change shall be produced in a new plant by placing it in circumstances different from those which are natural to it. But as the number of cultivated plants, especially flowering ones, has been greatly increased of late,—as they have been brought from every known region in the world, and from every variety of soil and atmosphere,—the knowledge of them, and of their adaptation to places and modes of treatment, is gradually increasing, by the slow but sure process of experiment and observation; and this long neglected, but most essential, portion of the art is extending even to plants which have been so long acclimated as to have become almost natives.

As this knowledge extends, it will save the cultivator much labour, and also remove that uncertainty which still belongs to many branches of his art. Thus, the cultivation of the *Cerealia*, or corn plants, for the purpose of obtaining larger and more farinaceous seeds, has thrown the principal action of life in the plant into this operation, so that, by the time the seeds are perfectly ripened, the plant is dead as an individual. Wheat is perhaps the first, and also, in England, the best example of this change by culture. The native plant is not known; but from the fact of its tillering at the root, and the general analogy of the grasses, it is highly probable that the original plant has been perennial in the root, from which new branches burgeoned every season, although those which produced stems and ears were annual. In a cultivated state, however, and indeed as now known anywhere, wheat plants are annual in every part of their structure; and the tillering, which forms an aftermath in the grasses as they are mowed or eaten down, but more especially in the latter case, occurs in the early part of the season; and the tillering or lateral shoots send up stems, the ears of which, generally speaking, ripen at the same time with those of the central or principal ones. This is a very important instance, as it is one in which the change is very conspicuous, and it is open to every one's observation. The general principle is, that the forcing of the plant by rich manure and artificial culture has worked it into more vigorous growth, and a greater production of farina than it had in the wild or natural state; but that this increase has been obtained by shortening the life of the individual plant. It is the same in all the *Cerealia;* and from the analogy of many other vegetables, it may be considered a general principle.

Cultivated trees, also, though they have a more rapid growth, and obtain a larger size, are softer in the wood and less durable, both as growing trees and as timber, than those which are in a state of nature; and when the natural woods are cut down, and artificially planted ones substituted in their stead, the timber is of inferior quality, and far more subject to decay and rot. For instance, no planted timber is equal to that of the old oaks and pines of the British woods and forests; and if the mahogany of Central America and the West India islands, and the teak of India, shall be all cut down, no human art will obtain equally good timber from the same species: and the same fact holds with regard to every kind of tree with which we are acquainted. Common forest trees are valuable only for their timber, if we waive the consideration of the ornament and shelter which they afford; but when a tree is cultivated for the sake of its fruit, the wood is rendered of a nature still more perishable, whether that tree is on its own stem or grafted. We have instances of this in the crab and the cultivated apple, and also in the sloe and the cultivated plum, in which the wild ones are remarkable for the hardness and durability, and the cultivated for the perishable nature, of their timber.

In flowers the case is still the same; and by comparing natural and cultivated growth, we find that the analogy holds through the whole vegetable kingdom. No superiority of soil or shelter of situation can prevent the consequences; because, though by skilful treatment we can force an additional quantity of any kind of produce in the plant, we weaken its stamina, and disturb the natural balance of its powers, by so doing. Were it possible to devise means by which the greater produce could be obtained, and the full stamina of the plant kept up, it would be the greatest improvement that ever was effected in the art of cultivation, and in no department would it be greater than in that of flowers.

The production of seeds is the grand natural purpose of flowering; and in so far as art directs the strength of vegetable action to the obtaining of more numerous and finely expanded petals, that action is withdrawn from the production of seeds and the process of fertilization, both in the fertilizable and the fertilizing organs, whether these be in the same flower, in different flowers upon the same plant, or in flowers upon separate plants. But it is always the fertilizing organs which give way most readily, whether to severity of climate or season, or to the high cultivation of the petals; and, while the one flower or part of a flower is still capable of being fertilized, the other part is obliterated, or rendered too weak for being able to fertilize it. It is here that cross impregnation becomes necessary, not only with a view of obtaining varieties, and thus continuing the species, whether the seedlings deviate from its characters or not. When the art of Floriculture was in its infancy, many of the superior species that were introduced from warmer climates, died out, in consequence of Florists being ignorant of this fact; and as these were not then in such general correspondence and connexion as they are now, seeds were procured with much more difficulty.

When the art of the cultivator has carried the beauty of the flower to the utmost extent to which it can be forced, and the greater part of the anthers have been changed into petals, the plant stands, as it were, upon the very verge of existence. It is true that many flowering plants can be continued and multiplied by layers, by cuttings, or by buds; but though these are more true to the parent plants, and come sooner into flower, they have not the durability of seedlings. It indeed appears that, though a long time is required in some cases, all succession plants obtained from parts of other plants, and not from seeds, have a final period of vegetation, beyond which not one of them can exist; and that therefore, if we are to make sure of a continuation of the species, we must, at least at intervals, have recourse to seeds; for it is in these, and not in any pieces of old plants, that we have the true beginnings of generations.

For this purpose it is desirable that some at least of every desirable species, which can be made to ripen seed in our climate, should not be excited above the seeding state, either by forcing the individual growth or the petals of the flowers, and that on the other hand we should be equally careful not to starve and stint them below this stage. It is for this reason that cultivators should be well informed respecting the native soil, climate, and circumstances of every such plant; for though these may not happen to be the best, either for freedom of growth or for fineness of flowering, they are always the best for fertility; and it is to the fertilizing organs that our chief care should be directed.

We can, in part at least, see and understand the reason why the fertilizing organs of plants are the first to give way. They are the most delicate, and also the most exposed to vicissitudes of the climate and weather. The fertilizable parts are more protected; and the greater number of seeds are enclosed in pericarps, of some description or other, which are often almost proof against these vicissitudes. It is probable that the first action of the seed toward maturity is shut up from the air and light, and at a temperature lower than that which the exposed portion of the flower has. The pollen, on the other hand, requires a concentration of the genial powers of the climate and season; and thus, if a reverse comes before the fertilizing is completed, these more tender parts are weakened, or even destroyed. For this purpose the anthers, or pollen masses, are exposed; and all the natural garniture of the petals is closely connected with those organs, and most likely contributes to the perfecting of them, though in a manner too nice for our observation, and too obscure for our understanding. This is rendered the more likely by the fact that an increase of the number and beauty of the petals is always accompanied by a weakening of the anthers; and, as has been said, when this is carried to the highest point, the plant ceases to be fertile. Hence, in cross impregnation, it is always desirable that the flowers from which the pollen is taken should not be too double; although those which are quite single are apt to bring the double flowers to which they are applied too nearly to their own state. If the anthers of the plant which is to be impregnated are only weakened and not quite destroyed, it is desirable to leave them, and only assist them with the pollen of the other plant; but, if the object is to obtain hybrids different from both parent plants, then the anthers of the impregnated plant should be removed before they have begun to perform their function, either naturally or by the intervention of insects—and it is highly probable that hybrids, especially among plants abounding in pollen, are often produced by these insects. The subject is, however, an extensive, as well as nice and difficult one, and so we must not extend it too far in any one paper, or continue it in every number of our Journal.

ACACIA ARMATA.

"A CONSTANT SUBSCRIBER," who expresses his apprehension of losing a fine plant of this species, has in all probability injured it by want of attention to the seasonal nature of the country of which it is a native. The Acacias are all *leguminæ*, or podded plants; and they belong to the *Polygamia monœcia* of the Linnæan system. One hundred and three species, forming the sub-genus *Phyllodineæ*, are all natives of New Holland, and they are greenhouse shrubs. In the seedling state they have leaves, but when they come to maturity the leaves disappear, and the dilated petioles, which are called phyllodia, are all that remain. This character of the leaves, or substitutes for them, enables the plant to endure the long-continued droughts, and also the peltings of rains to which it is exposed in its native climate; and it is from the want of imitating this climate, and partly also the native soil of the plants, that they do not answer as window shrubs or as inmates of miscellaneous greenhouses. Both the soil and the climate of Australia are peculiar. The former contains more of decomposed rocks and less vegetable matter than are to be found in almost any other soil. The absence of the vegetable matter is owing to the want of an annual manuring by leaves; for such leaves as do fall are hard and dry, and contain more woody matter, and less parenchyma, than common deciduous leaves. They are tempered to long seasons of drought, and heavy peltings from those rains which disintegrate the rocks, and furnish so much mineral or earthy matter to the soil.

Of course such shrubs will bear the greatest extremes of dryness and moisture, and indeed are not healthy unless when exposed to those extremes; but still the exposure must be adapted to the habit of the plant as formed by its native climate, or, if a departure from this is to be attempted, it must be by very slow degrees.

When the plant begins to show signs of growth, it must be well watered, not by continual dripping, but by copious applications at intervals; and the soil should be light and porous, so as not to retain the water. When the flowers are beginning to expand, water should be given sparingly and at intervals; and when the flowers begin to go off, it should be withheld altogether, until the plant again shows signs of growth. In this way, the health of the Acacias and most other New Holland shrubs may be kept up; for if they get the proper seasonal treatment they are very hardy. If the phyllodia become discoloured, or shrivel, or drop off, it generally arises from disturbing the plant with the stimulus of water at the season when it ought to be left in perfect repose.

In a window of a common apartment, or in a greenhouse, where the plants of many climates are collected together, it is not easy to get a sufficiently dry atmosphere for New Holland shrubs; and therefore, to grow them in high perfection, they should have a house for themselves. When mixed with other plants, some of them requiring a moist atmosphere, the New Holland shrubs will never succeed to absolute perfection; and the best chance that they have is to keep them as dry as possible during the season of repose.

UNION OF DIFFERENT SPECIES OR VARIETIES OF PLANTS.

THAT such unions are practicable has been long known among cultivators. The art of budding and grafting is an every-day expedient; but this is a connexion rather than a union: the parts are never interblended: each remain as distinct as they were before they were united. The fluids absorbed by the roots nourish and support both; but there is no intermixture of their respective membranes, only a simple attachment of the cellular matter acting like cement. The wood of the stock and that of the graft, however exactly fitted in the operation, cannot possibly unite: it is the cellular tissues of the bark, and increasing alburnum, that forms the junction.

Some propagators have supposed that if the shoots of two different species of the same genus were so closely united lengthwise, by removing the opposing sides, and binding the wounded surfaces together, as to form one entire shoot, that there could not but be some interchange of their respective qualities or properties; and that flowers or fruit of a mixed character would be the result. Shoots have been so tried; bulbs and tubers have been split and united to other kinds, with the same view of obtaining a mongrel or intermediate product. But all to no purpose. Whenever a bud came forth it presented the pure habit, with the fruits and flowers of the plant whence it sprung, without taint of the other with which it was united.

The best authenticated account of the intermixture of a species and a variety has been, it seems, exemplified between the common liburnum and the pale purple-flowered variety of the same. The insertion of a bud of the latter into the former produced both yellow and purple flowers from the same bud, if the reporters were not deceived. If this really happened, it certainly shows that a taint was some how communicated; but whether upon the organism or into the sap is not explained.

The Italian gardeners, it seems, are particularly desirous of having several fruit or flowering trees growing on the same stem; but, as this cannot be done unless the whole are of the same genus, they have recourse to an expedient which comes within the bounds of practicability. They place their grafts round the base of the stock in such a way as, while bound to the stock, they make roots like cuttings entirely independent of the stock except for support. Thus a cultivator may have the orange, pomegranate, fig-guave, and grape-vine, all growing round an olive stock, and as such may be considered an aboricultural curiosity. The operator may wish to have it believed that he has succeeded in uniting those very different and discordant plants; but the vegetable physiologist knows such a thing to be impossible. Their roots and stems may be in juxtaposition; but their membranes are decidedly repulsive and dissociable.

The ease with which different varieties of apples, pears, plums, peaches, &c. are placed on the same stock, causes such freaks to be often successfully executed, but with no other view than the curiosity of the thing. But by the same means orchardists may gain many advantages by coupling trees of different character as to vigour of growth and manner of bearing, either by correcting or advancing the growth, and consequently the fruitfulness of each other. The florist may do the same with his Camellias, and particularly with the common rose; and a pyramid of these last, composed of sorts which flower at different times, is a most suitable ornament for a lawn or for the columns of a conservatory.

In green-houses we often see an assemblage of the different species of the Cereus all stuck upon the *Speciosissima*, or upon the *Pereskia*. This inoculation of one species with another is easily performed: the little branch intended to be inserted is reduced at the bottom, so as to fit a hole made in the stock, in which, when placed, it readily adheres, by reason of the glutinous consistence of the respective juices; and henceforth unites with and draws support from the foster stem on which it is inserted. Some of these associate very well; especially when the dwarf growers are elevated on the stems of the taller sorts; but at best they are only practical whims or curiosities.

Parasitical plants are those which breed and live upon other plants. The far greater number of these belong to the mosses, lichens, and fungi. Some of these use the stems of trees and other plants as supports or habitations only. Others attach themselves to the leaves, culms, or roots of healthy plants, subsisting on the sap and destroying the organization. Of these last the mildew on trees and the rust on corn are well known. Parasites of more conspicuous character are the toothwort, the broomrape, and the mistletoe: these seat themselves upon or under the bark, sucking the juices by an inflated base firmly fixed on the alburnum of the tree on which the parasite grows. The Dodder is another curious plant, being only supported by its own roots until its twining stems can lay hold of the stems of some other plant, on which it afterwards subsists. In warmer climates the beautiful Loranthus, which invariably inhabits the oak, is a parasite; and is said to have been the mistletoe of the Druids, and on this account must have once been common in England, but extirpated along with its devotees. It is rather strange that this highly ornamental plant has not lately been introduced into this country, as the mistletoe has been into Scotland; that is, by removing a young oak on which it grows naturally, or by grafting or budding it upon a young oak in a pot.

But notwithstanding the very intimate union which some of the last mentioned plants form with those on which they grow, there is no perfect inosculation of their membranes, as already observed, so as to alter either their flowers or fruit. It is said, indeed, that pears worked on the quince stock are more austere than they are on their own stock; but this has never been clearly proved. There are some instances of moderately or weakly growing stocks being enlarged and strengthened by having grosser growing grafts placed upon them; but this is an alteration of bulk only, not of properties or essential qualities.

M.

FUCHSIA CORYMBIFLORA, AND FULGENS.

F. corymbiflora should not be cut down in the autumn, unless the shoots have died back. It should be left alone until the wood is completely ripened, and the leaves begin to drop off. Then it should be placed for the winter in a cool and dry situation, equally protected from frost and damp. Before it begins to vegetate in the spring, it should be examined, and all the shoots which are dead in the points cut back to the living wood. At the same time it should be shaken out of the old soil, the roots trimmed a little, the plant repotted in a rich earth-compost, and gently watered; and by this means it will have at least thrice as many flowers as if cut down in the autumn.

F. fulgens can be propagated by dividing the roots; but that is an idle labour, and it is not the best way of obtaining fine flowers. Cuttings are very easily struck, and make better plants, with finer, larger, and more highly-coloured flowers than old plants or dividings of the roots. The last would have some chance of not flowering at all; or if they did flower, the blooms would be small and insignificant. The best plan is to keep the old plant in a healthy state during winter, and to strike the cuttings early in the spring in a little brisk heat, in the same manner as Dahlias, and then there is a certainty of having an abundance of fine plants flowering in the utmost perfection. Besides this there are many plants, more especially from Central America, which grow most vigorously and flower most beautifully from cuttings struck and forced by artificial heat in the spring. For this purpose, a small stove is a valuable addition to a greenhouse.

THE FLORIST'S LETTER BOX.

In beginning our notice to our corresponding friends, we shall first say to Mr. Macdonald, of "The Glen, Peeblesshire," that we still have his first communication, and shall reconsider it. To the others, we beg leave to say, that want of space prevents us from giving their queries at full length; but we trust they will be satisfied with the answers, in the drawing up of which we have consulted the best practical authorities.

Annuals Grown on Moss.—Many sorts of annuals will do well sown upon moss; and the best moss for them is the white moss, or sphagnum, which should be cut rather small, and if a little soil is mixed with it, the plants will grow stronger and flower better. The proper size of pots is large forty-eights, rather flat. The moss should be pressed firmly down in the pot, and filled up to within an inch of the rim. The seeds are then to be sown, and a gentle watering given from a small-sized watering pot; but they should not be watered unless when the moss is very dry. In Autumn and early Spring, especially, water, except enough to keep up a very gentle moisture, is highly injurious to vegetation.

The annuals, of which a select list is subjoined, that will answer for the mode of treatment, may be sown at different times, and thereby a succession of flowers may be kept up all the year round. The following are the principle ones, but many others will succeed:—

Speculoria, speculum, blue.
    pentagonia, blue.
Œnothera densiflora, purple.
    coccinea, purple.
    rubicunda, red.
    quadrivulnera, purple.
    rosea alba, white and rose.
Clarkia pulchella, rose.
Lopezia cordata, purple.
    coronata, purple.
    pumila, purple.
Linonthus dichotomus, yellow.
Liptosiphon grandiflorus, yellow and purple.
    androsaceus, white and blue.
    luteus, yellow.
    densiflorus, purple and white.
Collomia linearis, flame coloured.
    coccinea, scarlet.
Gillia capitata, blue.
    tricolor, yellow, purple, and white.
    Achillifolia, blue.
Shagelia densiflora, blue.
    lutea, yellow.
Collinsia grandiflora, purple and blue.
Collinsia bicolor, purple and white.
    verna, blue and purple.
    heterophylla, purple and white.
Livonia latifolia, yellow.
    triphylla, blue and yellow.
    reflecta, white.
    cretacea, blue and yellow.
    virgata, blue.
    theymifolia, yellow.
    pedunculata, blue.
Nemesia floribunda, white and yellow.
Nemophila insignis, blue.
    aurita, purple.
    atomacea, white and purple.
Eutoca Menzesii, purple.
    sericea, blue.
    viscida, blue.
    Wrangeliana, blue.
Phocelia congesta, blue.
    tancetifolia, blue.
Amphalodes linifolia, white.
Mignionette—Reseda odorata.
Clintonia pulchella, yellow and blue.
Virginian Stock.

Very many genera and species besides those now mentioned will thrive by this mode of treatment; and the time of flowering, as well as the choice colours of the flowers, will depend on the time of sowing, and also on the care taken of the plants. If due attention is paid, a gay appearance may be given to the green-house, or to well managed windows, when all the perennial plants and seasonal bulbs are out of flower.

The Guernsey Lily.—The best soil for growing the Guernsey Lily is light loam, well rotted manure, and coarse sand, all in equal portions. The pots should not be larger than small forty-eights; a piece of pot, placed with the concave side downwards, should be placed over the aperture, and a few more pieces should be laid over and about this one; above these some bog moss ought to be placed, and then filled up with the compost to within an inch and a half of the top of the pot; and then the bulb should be put in, but placed only on the surface, and not buried in the mould. This being done, the pots should be placed under a wall, and covered over for at least two months, or till such time as they have made pretty good roots. When wanted to come into flower, they should be placed in a frame, a greenhouse, or a window, where they shall have plenty of light, but where no frost can reach them. Until the flowering is over, they will require very little water. They should be potted as soon as obtained, and placed as has been directed. When the flowering is over, they will begin to grow, in which state they will want a little more water, which should be supplied to them from time to time until the leaves begin to turn yellow, which shows that the growth is over, and then water must be entirely withheld, and the plants allowed to go to rot.

The Tuberose.—It will answer very well in the same soil and size of pots as the Guernsey Lily, and the general treatment is much the same, only the Tuberose must be planted deeper in the mould, and get a more abundant supply of water, though not in excess. When the plants get into a strong state of growth, they should be placed in pans of water with pebbles in them, on which to suppress and support the pots.

For window culture, both the Guernsey Lily and the Tuberose may be grown in pots of sphagnum, with very little mould. The sphagnum for this purpose should be cut small before it is used, and no more water given than is sufficient to keep the sphagnum moist.

Mole Heaps.—Loam taken from mole heaps will answer very well for horticultural purposes if mixed with unsifted peat, or any other unsifted soil, and with coarse sand.

Shrubby Calceolarias.—As these are of no use after they have done flowering, they should be thrown away, and the succession kept up by young plants struck in the summer, potted first in small sixties, and again into larger sixties; and they should be placed in a rather cool and dry part of the greenhouse near the glass, but where no frost can reach them. In this situation they should be kept during the winter; and when the spring comes, they should be repotted, first into small forty-eights, and shifted as the roots fill the pot, till they reach the size of a twenty-four or even a sixteen. While they are in these winter quarters, the plants should have no more water than barely suffices to keep them alive; but in the growing season they should have plenty.

Verbenas.—Young plants of these should be struck in the summer and put into large sixties, so that the pots may be well filled with roots before the winter sets in. During that season, the pots should be placed in a dry and cold part of the greenhouse, where air can be given on fine days; and they should be near the glass, and yet quite protected from frost. During this period they ought to get as little water as possible, no more than just sufficient to keep them alive during the winter. When the Spring comes, and the shoots are tough enough for the purpose, they should be taken off and planted as early as possible, because they will grow much more vigorously, and flower much finer, than those plants which have been kept throughout the winter.

THUNBERGIAS—should be treated much in the same manner as Verbenas, only they should be potted during the winter in small sixties, and not in large ones.

not so unfavourable to vegetation generally, as if the days had been warm and sunny, and the nights cold. When this is the state of the weather at an advanced period of the season, plants in growth are alternately warmed and chilled at very short intervals, which is always productive of weakness, and sometimes of destruction to plants, of whatever countries they may be natives. The cold which we have mentioned was not of this character, because there was but little evaporation or formation of dew, and no hoar frost; both of which are injurious, by producing chill in the plants while the morning sun is turning the dew or hoar frost into vapour. Under a bright sky, this is speedily done, and the chilled plants become as quickly heated by the sun; unless in such as belong to the sun-proof genera, whose native habitat is on arid plains, and where a portion of the natural sap of the leaves is also evaporated through the epidermis. This renders the leaves and other tender parts more susceptible to heat during the day, and consequently, the cold of the night comes more quickly upon them, and does them greater injury. Hence the cold to which we have alluded was not unfavourable to the individual growth of the later bed and border plants; but it retarded the flowers, and injured such seeds as were in the progress of filling and ripening. On this account, corn, and other field plants which are cultivated for the seeds, and were then in progress toward ripening, must be expected to have the seeds deficient in farina, and shrivelled when they are dry. The same, of course, happened to the seeds of garden plants which were in like progress, and therefore such seeds, if sown, will produce poor plants, and many of them will not come up at all; consequently, it will be very injudicious to use, for next year's sowing, home seed of those annuals which were ripening at this time. On the late flowering plant, however, the effect will be rather beneficial, because the retardation of the flowering has enabled the plants to acquire more strength, and the flowers will on this account be finer, though probably not so numerous. Much, however, will depend upon the character of October; for if that month be rainy, many of the late flowers will not open; and if there comes frost they will be destroyed.

In the middle part of the month, the temperature was higher, and there was a good deal of sun, and little rain, except a sprinkling of occasional light showers. This was highly favourable to vegetation, and especially to the bringing forward of the later blooms; and had the same weather continued till far into October, the autumnal show would have been very fine. But as the equinox drew near, heavy rains set in, with a diminution of temperature, though not so great as that at the beginning of the month. This again retarded the flowering, and injured such flowers as had blown, or were about to blow, and thus the more advanced part of the season acquired still greater interest. This unsettled weather still continues while we write; and therefore we must wait till at least the next month, before we can sum up the characters of the weather for the floral season. In greenhouses and stoves, the weather has little effect on flowering plants, compared with what it has on out-door ones; but still it has some, especially on those in the green-house, because there is deficiency of light, and of every description of solar action.

CALENDAR FOR OCTOBER.

Stove.—The repotting and arrangement of the plants should be completed as soon as possible. The temperature of the house should be kept rather lower than usual, and water sparingly. In order to remove all causes of excitement, give a full supply of air on every fine day. That the plants may be prepared for their winter rest, towards the end of the month, as it becomes necessary to use more fire heat, the syringe may be used occasionally, so as to avoid falling into the opposite extreme.

All luxuriant growths should be pruned back. Tie up climbers. Small plants, whether from seed or cuttings, should be kept near the light. Insects should be carefully destroyed, as soon as they appear.

GREENHOUSE.—The same observations apply here, with respect to housing plants. As much air as possible should be given every day, and even night, as long as may be safe. Free-growing plants require frequent stopping. Geraniums and others required to be bushy, should be frequently turned to the light. Pick off decaying leaves, and keep every plant clean, particularly of insects; for if once allowed to obtain a hold, it will be much more difficult to get rid of them; and they are far more injurious at this season, than any other. Give but little water, and that in the morning.

Chrysanthemums should be brought in; to perfect their buds, they require a liberal supply of water, as also Camellias. Dry off Gloxinias, Tropæolums, &c. Succulents require but very little water.

FLOWER GARDEN.—Auriculas, Carnations, Picottees, and Pansies, should now be got ready for, and placed in their respective winter-quarters: for the first, glazed frames are absolutely necessary, and they should be perfectly sound, so that there may be no drip; for the second and third, frames are best, though not so necessary as for Auriculas; for the third, a temporary protection of hoops and mats is sufficient. They all require to be kept as dry as may be prudent, and also clean. Pot roots of Dahlias should be dried off. A little earth drawn round the roots of blooming plants, will protect them from the first frosts. As soon as done blooming, they must be taken up, dried, and stored, for the winter. Towards the end of the month, Anemones may be planted for an early bloom: as also Hyacinths, Tulips, Crocuses, &c. Bulbs for forcing should be potted and plunged out of doors in a bed of old tan or ashes. A few annuals, such as Stocks, Larkspurs, and Mignonette, may be sown for an early spring bloom, both in pots, and the open border. Transplant biennials and perennials; as also trees and shrubs, where required; though it is preferable to move the tender kinds in the spring. Save seed of annual and other favourite flowers; these should be gathered only when perfectly dry. The pods of Dahlias left for seed should be protected from the wet; as also Zinnias.

FLORICULTURAL INTELLIGENCE.

July 22. ROYAL DEVON AND CORNWALL BOTANICAL AND HORTICULTURAL SOCIETY. The Summer Exhibition of this Society was held at the Town Hall, Devonport. The following is the list of the prizes:—

FLOWERS AND PLANTS.

The best Group of 12 sorts of Greenhouse Plants...15*s*. to P. E. Lyne, Esq. for Rhodochiton volubile, Clematis Sieboldii, Sollya heterophylla, Diplacus puniceus, Lotus Jacobæus, Siphocampylos tricolor, Pimelea decussata, P. hispida, Jasminum gracile, Fuchsia globosa (Palmer's), Origanum Dictamnus, Angelonia salicariæfolia.

Best Collection of 12 sorts of Pelargoniums (Geraniums) (class 1)...15*s*. to P.E. Lyne, Esq.

Best Seedling Pelargonium (class 2)...Gold medal, Mr. F. Wood, Plymouth; second best ditto, silver medal, to P. E. Lyne, Esq.

Best 12 Carnations, of sorts...10*s*. Mr. R. Barrett.

The 13 best Picottees, sorts...yellow, (class 1), 7*s*. 6*d*. ditto.

The 12 best ditto...not yellow (class 2), 7*s*. 6*d*. ditto.

Best 6 Fuchsias, of sorts, grown in pots...10*s*. P. E. Lyne, Esq.; second best ditto, 7*s*. 6*d*. W. C. Hodge, Esq.

Best Collection of 18 Dahlias, of dissimilar blooms...10*s*. Mr. T. Roberts.

Best 6 Spikes of Hollyhocks, of sorts...5*s*. ditto.

Best 6 Tender Annuals, of sorts...7*s*. 6*d*. P. E. Lyne, Esq.; 6 second best ditto, 5*s*. Mr. J. Cook.

Best Collection of Hardy Annuals...5*s*. W. C. Hodge, Esq.

Best Group of Ten-week Stocks, of sorts...5*s*. J. Chapman (cottager), Saltash; second best ditto, 3*s*. 5*d*. W. C. Hodge, Esq.

Best Collection of 12 Marigolds...3*s*. 6*d*. Mr. J. Taylor.

Best 12 varieties of Verbenas, in pots...10*s*. P. E. Lyne, Esq.; second best ditto, 7*s*. 6*d*. W. C. Hodge, Esq.

Best Collection of Indigenous Plants...15*s*. Mr. J. Ellis, Widey.

Best Design of Cut Flowers...10*s*. Mr. J. Taylor.

Best Specimen Rare Plant, not having before obtained a prize...10*s*. P. E. Lyne, Esq. Astelma eximium.

EXTRA PRIZES.

Dahlias...7*s*. R. Sleeman, Esq. Tavistock.
Cockscombs...5*s*. Mr. Cook.
Heartsease...2*s*. 6*d*. P. E. Lyne, Esq.

NURSERYMEN'S PRIZES.

The best Collection of Roses, not less than 12 nor more than 48, and not more than two of a sort...the gold medal, Mr. Griffin, gardener to Mrs. Wells, Cowley Bridge, Exeter.

EXTRA PRIZES.

For Tender Annuals...10*s*. to Mr. J. Cook.

July 27. HUNTINGDONSHIRE HORTICULTURAL SOCIETY. The twentieth Anniversary of this Society was held at the Town Hall, Huntingdon. Prizes were as follows :—

FLOWERS.—CARNATIONS.

Bizarre Scarlet...1. Mr. F. Barringer, Hepworth's Albion. 2. Mr. Giddins, ditto. 3. Mr. F. Barringer, Hepworth's Leader. 4. Mr. Giddings, Moore's Worthy.

Purple...1. Mr. F. Barringer, Barringer's Surprise. 2. Ditto, ditto. 3. Mr. Joseph Barringer, ditto. 4. Mr. F. Barringer, ditto.

Flake Scarlet...1. Mr. Wood, Wood's Lady Delawarr. 2. Mr. F. Barringer, Lydia. 3. Mr. Giddings, Rob Roy. 4. Mr. F. Barringer, Lydia.

Purple...1. Mr. Marshall, Queen of Sheba. 2. Mr. Giddings, ditto. 3. Ditto, ditto. 4. Mr. F. Barringer, ditto.

Rose...1. Mr. Frankling, Sir George Crewe. 2. Mr. F. Barringer, Barringer's Apollo. 3. Mr. J. Barringer, Eli's Lovely Anne. 4. Mr. Wood, Sir George Crewe.

Best in any colour...Mr. F. Barringer's Surprise.

Best Seedling Carnation in any colour...by Mrs. Wood, Mr. F. Barringer, Barringer's Masterpiece. 2. By the Society, ditto, not named. 3. Mr. Franklin, not named.

PICOTTEES.

Purple...1. Mr. Headley, Sharpe's Invincible. 2. Mr. Giddings, Grand Duchess. 3. Mr. Frankling. 4. Mr. Marshall.

Red Dark...1. Ditto, Duke of Wellington. 2. Mr. Wood, ditto. 3. Mr. Giddings, ditto. 4. Ditto, Sir Robert Peel.

Scarlet or Pale Red...1. Mr. Headley, Headley's Sarah. 2. Mr. F. Barringer, Sharpe's Comet. 3. Mr. Franklin, no name given in. 4. Mr. Marshall, ditto.

Rose...1. Ditto, Green's Victoria. 2. Ditto, ditto. 3. Mr. Franklin, not named. 4. Mr. Headley, ditto.

Yellow...1. Mr. F. Barringer, Martin's Queen Victoria. 2. Ditto, ditto. 3. Mr. Franklin, ditto. 4. Mr. Giddings, ditto.

Best in any colour...Mr. Headley, Headley's Sarah.

Best Seedling Picottee, in any colour...by Mrs. Wood, Mr. Giddings, Lady Alice Peel. 2. by the Society, Mr. F. Barringer, Barringer's Fairy Queen. 3. by the Society, Mr. Giddings, Giddings's Nonsuch.

Best 3 Double Dahlias...1. Mr. W. Hogg. 2. Mr. Beaufort. 3. Mr. W. Hogg. 4. Mr. Headland.

Best Cockscomb, in pot...by Mr. Wood, Mr. Walker.

Best Collection of Hollyhocks...1. Mr. Wood. 2. D. Veasey, Esq.

Best Collection of Plants, in pots, of not less than 20...1. Mr. Wood. 2. D. Veasey.

Best 6 varieties of Stocks...by Mr. Ingram, Mr. Mann.

Best Hothouse or Greenhouse Plant, in pot, to be shown separate from the collection... G. Rush, Esq.

Best hardy ditto...D. Veasey, Esq.

Extra Prizes were awarded to Mr. Wood and Mr. Raye for collections of 24 Pansies; and to Mr. Mann, gardener to the Earl of Sandwich, for a Design beautifully executed in flowers of every variety.

July 30. Devon and Exeter Botanical and Horticultural Society took place on the 30th of July. List of prizes:—

GREENHOUSE PLANTS.

The best group of 12 Plants, 20*s*. Mrs. Wells; second best ditto, 15*s*. J. W. Buller, Esq.; the 3 newest and best sorts, 10*s*. Mrs. Wells; the 3 second best ditto, 7*s*. J. W. Buller, Esq.

The 12 best Cape Heaths...10*s*. Mrs. Wells; the 6 best ditto ditto, 7*s*. Mr. Jas. Clark.

The best new Fuchsias...10*s*.; the 3 second best ditto, 7*s*.; the best collection of ditto, 7*s*. Mrs. Wells.

Newest and best 6 Pelargoniums...10*s*. Mr. J. Clark.

HERBACEOUS PLANTS.

The best 12 Hardy Plants...7*s*. Mr. Jas. Clark; second ditto, 5*s*. J. W. Buller, Esq.

The newest and best Single Specimen...5*s*. Mr. Jas. Clark.

The 6 best Verbenas...5*s*. Mrs. Granger.

ROSES.

The best collection of any kind...7*s*. second best ditto, 5*s*. H. Porter, Esq.

CARNATIONS AND PICOTTEES.

The 6 best Bizarres...7*s*. Mr. Colson; the 6 second best ditto, 5*s*.

The 6 best Flakes...7*s*. Mr. J. Clark; the 6 second ditto, 5*s*. Mrs. Wells.

The best Collection, not less than 12 varieties...7*s*. Mr Colson; second best ditto, 5*s*. W. Kingdon, Esq.

The 12 best Picottees...7*s*. Mr. Colson; the 12 second best ditto, 5*s*. Mrs. Wells.

The 6 best yellow ditto...7*s*. Mr. Colson; the 6 second best ditto, 5*s*. Mr. Gray.

HEARTSEASE.

The best 24 sorts...7*s*. Mr. Jas. Clark.

The 12 newest and best sorts...7*s*. Mr. Jas. Clark; the 12 second best ditto, 5*s*. T. Porter, Esq.

TENDER ANNUALS.

The 6 best Cockscombs in pots...5*s*.

The 6 best Balsams in ditto...5*s*.

The newest and best of any kind...5*s*. J. W. Buller, Esq.

The best Bouquet of flowers...7*s*. Mrs. Granger; second ditto, 5. H. Porter, Esq.

EXTRA FLOWERS AND PLANTS.

Achyranthus, Stove Plant...7*s*. Mrs. Wells.
New Stove Plant from East Indies...5*s*. H. Porter, Esq.
Fuchsias...5*s*. J. W. Buller, Esq.
Herbaceous Plants...5*s*. H. Porter, Esq.
Pentstemon...5*s*. J. W. Buller, Esq.
Group of Herbaceous Plants...5*s*.; Verbenas...3*s*. 6*d*.; Liatris...5*s*. Sir T. D. Acland.
Carnations...3*s* 6*d*. Mr. R. Webber.
Seedling Picottee...5*s*. Mrs. Granger.
Collection of Picottees and Carnations...3*s*. 6*d*. Mrs. Wells.
Seedling Heartsease...5*s*. T. W. Gray, Esq.
Bouquet of Flowers...3*s*. 6*d*. S. T. Kekewich, Esq.
Flox...2*s* 6*d*. Mrs. Granger.
Calceolarias...5*s*. J. W. Buller, Esq.
Miscellaneous Collection of Stove Plants...7*s*. 6*d*.
Ditto of Greenhouse ditto...5*s*. Mrs. Wells.

FLOWERS AND PLANTS.—(ORCHIDACEÆ.)

The best Group of 6 Plants...20*s*. Mrs. Wells; second best ditto, 15*s*. J. W. Buller, Esq.

The new and best Specimens...10*s*. Sir T. D. Acland; second best ditto, 7*s*. Mrs. Wells.

STOVE PLANTS.—(NOT ORCHIDACEÆ.)

The 6 best Specimens...20*s*. H. Porter, Esq.; the 6 second best ditto, 15*s*.

The newest and best ditto...10*s*. J. W. Buller, Esq.

August 10. Sheffield Practical Horticultural Society—held their fourth Exhibition on the grounds of Mr. C. Palfreyman. The display of Carnations and Picottees was splendid. The prizes were awarded as follows:—

Premier Stove Plant...1. and 2. H. Wheat, Esq.
Premier Greenhouse Plant...1. and 2. H. Wheat, Esq.
Best Greenhouse Climber...Mr. Palfreyman.
Best Petunia...1. Mr. Lindley. 2. H. Wheat, Esq.
Coxcombs...1. and 2. Mr. Palfreyman.

Best China Rose...Mr. Palfreyman.

Best Scarlet Geranium...Mr. Palfreyman.

Best Lilac ditto...H. Wheat, Esq.

Best Pemelia...1. and 2. Mr. Palfreyman.

Best Rose ditto...1. Mr. Palfreyman. 2. H. Wheat, Esq.

Best Fuchsia...1. and 2. Mr. Palfreyman.

Best Bouquet of Cut Flowers...H. Wheat, Esq.

Best Herbaceous Plants...Mr. Alsebrook.

Best Display of Cut Hardy Flowers...Messrs. Green and Woollin, to whom the work called "The Botanic Garden," was awarded.

CARNATIONS.

Scarlet Bizarres...Premier, Don John, Mr. Broadbent. 1. Leader, Mr. Senior. 2. Duke of Leeds, ditto. 3. Jolly Dragoon, Mr. Yeardley. 4. Prince Albert, Mr. Archer. 5. Don John, Mr. Senior. 6. Chief Ranger, Mr. Yeardley.

Crimson or Pink Bizarres...Premier, King Alfred, Mr. Archer. 1. William Caxton, Messrs. Green and Woollin. 2. Dr. Young, Mr. Archer. 3. Paul Pry, ditto. 4. Dr. Young, ditto. 5. Duke of Kent, ditto. 6. Duke of Bedford, Mr Sykes.

Scarlet Flakes...Premier, Marquis of Granby, Mr. Senior. 1. Ditto, Mr. Yeardley. 2. William the Fourth, Mr. Senior. 3. Lady Jenkins, Messrs. Vessey and Bagshaw. 4. Leader, Mr. Yeardley. 5. Red Rover, Mr Archer. 6. Washington, ditto.

Pink or Rose Flakes...Premier, Lady Hood, Mr. Senior. 1. Duchess of Devonshire, Mr. Archer. 2. Lady Hood, Mr. Senior. 3. Mountaineer, Mr. Archer. 4. Queen of England, Mr. Yeardley. 5. Lady Milton, Mr. Archer. 6. Beauty of Rochdale, ditto.

Purple Flakes...Premier, British Queen, Mr. Archer. 1. Invincible, ditto. 2. Lady Margaret, Mr. Broadbent. 3. Charlotte, Mr. Archer. 4. British Queen, Mr. Yeardley. 5. Bellerophon, Mr. Archer. 6. Wellington, ditto.

PICOTTEES.

Purple Heavy-edged...Premier, Mr. Archer, Seedling, named Invincible. 1. Lady Talbot, Mr. Archer. 2. Dr. Horner, ditto. 3. Blue Bell, Messrs. Green and Woollin. 4. Major Healey, ditto. 5. Princess Victoria, Mr. Archer. 6. Cleopatra, ditto.

Purple Light-edged...Premier, Blue Bell, Mr. Rodgers. 1. Victoria, Mr. Broadbent. 2. Miss Emma, ditto. 3. Seedling, Mr. Muscroft. 4. Miss Emma, ditto. 5. Unknown, Mr. Yeardley. 6. Ditto, Messrs. Green and Woollin.

Red Heavy-edged...Premier, Mrs. Horner, Mr. Yeardley. 1. Mark Antony, Mr. Archer. 2. Lady Talbot, Mr. Sykes. 3. King of French, Mr. Senior. 4. Lady Talbot, ditto. 5. Derby Willow, Messrs. Green and Woollin. 6. Miss Ann, Mr. Archer.

Red Light-edged...Premier, Criterion, Mr. Rodgers. 1. Mrs. Horner, Messrs. Vessey and Bagshaw. 2. Lady Talbot, Mr. Muscroft. 3. Miss Bacon, Mr. Archer. 4. Unknown, Mr. Yeardley. 5. Seedling, Mr. Muscroft. 6. Ditto, ditto.

DAHLIAS.

Best White-edged...Beauty of the Plain, Messrs. Vessey and Bagshaw. 1. and 2. Solman, Girling's Nonpareil, Mr. Lindley.

Best Lilac...Mr. Muscroft. 1. and 2. Yellow, Messrs. Vessey and Bagshaw.

Best Purple...Messrs. Vessey and Bagshaw.

Best Crimson...1. Seedling, 1841, Mr. Lindley. 2. Mr. Rodgers. 3. Rival Sussex, Messrs. Vessey and Bagshaw.

Best Dark...Mr. Lindley.

August 12. PRACTICAL FLORAL AND HORTICULTURAL SOCIETY OF IRELAND.—The Autumnal Exhibition of this Society was held in the Portobello Zoological Garden. The prizes were awarded as follows:—

PRIVATE GARDENS.

Stove Plants...1. P. Nolon, Esq. (gardener, Mr. Thomas Maher,) for Hedychium Gardnerianum, Ceropegia elegans, Cerbera fruticosa, Lisianthus Russellianus, Ixora coccinea, and Ardisia serrulata. 2. Hon. Colonel Wingfield, Cork Abbey, (gardener, Mr. J. C. Humphrys.)

Greenhouse Plants, best 6...Mr. Humphrys, as above, for Helichrysum proliferum, Boronia serrulata, Melaleuca fimbriata, Frankenia pauciflora, Statice arborea, Diplacus puniceus.

Pelargoniums, best 6 Dark...Manners M'Kay, Esq. Dundrum, (gardener, Mr. P. Hynes,) for Prince George, Mervilliana, Hyder Ali, Desdemona, Olympicum, and Champion of Devon.

For the best 6 Light...1. Mr. Hynes, as above, for Joan of Arc, Lowndes's Perfection, Jewess, Queen Dowager, Prima Donna, and Gem. 2. Rev. C. Woolsey, Sandy-mount.

Best 6 Mixed...J. Jameson, Esq. Drumcondra, (gardener, Mr. J. Collins.) Mr Jameson's, and, indeed, the whole of the Pelargoniums, were remarkably well grown; we regret not having taken a note of the kinds, which contained some of the very best in cultivation.

Ericas, best 6...1. Mr. Thomas Maher, for Erica Hartnelli, oblata, vestita fulgens, ampullacea, ampullacea rubra, and gemmifera. 2. Mr. Humphrys.

Exotic, best grown specimen...Mr. Burke.

Best Exotic in flower...Mr. Thomas Maher, as above.

Calceolarias, best 6 Shrubby...Mr. P. Hynes, as above.

Ditto, best 6 Herbaceous...Ditto.

Mimuluses, best 3...1. Mr. Hynes. 2. J. H. Evans, Esq. Harold's Cross.

Fuchsias, best 6...1. Mr. William Cahil, Donnybrook. 2. Edward Clibborn, Esq. Sallymount, (gardener, Mr. B. Kane.)

Best grown specimen Fuchsia...Mr. William Cahil.

Ornamental Plants...Mr. J. C. Humphrys, as above, for Mimulus M'Lainii, Gesnera hybrida, Ceropegia elegans, Russellia juncea, Vinca alba, Sinningia guttata, Thunbergia aurantia, and Dracæna terminalis.

Herbaceous Plants, best 6...Mr. Hynes, as above, for Aquilegia glandulosa, Lobelia Millerl, L. hybrida, Phlox Lyonii, and Mimulus M'Lainii.

Exotic Bouquet...Mr. Montgomery; extra prize to J. H. Evans, Esq. as above.

Hardy Bouquet...1. J. H. Evans, Esq. 2. Mr. Montgomery.

Carnations, best 3 Pink Bizarres, best 3 Pink Flakes, best 3 Scarlet Flakes, and best 3 Purple Flakes...For each of these four classes a first prize was awarded to Mr. B. Kane.,

Picottees, best 3 Red...1. Mr. B. Kane, as above. 2. J. Walsh, Esq. Leeson-street.

Best 3 Purple...1. C. M'Namara, Esq. 2. Mr. B. Kane.

Best 3 Yellow...Ditto

Best 3 Rose or Pink...Ditto

Pansies, for the best 12 different varieties...George Walthew, Esq.

Dahlias, best 24...Mr. J. Ogilvy.

Best 12...1. George Walthew, Esq. Park Avenue, Sandymount, for Egyptian Prince, Rival Purple, Vitruvius, Hornsey Surprise, Volunteer, Danecroft Rival, Cox's Yellow Defiance, Nicholas Nickleby, Lady G. Croker, Lady Woodhouse, Penelope, and Beauty of the Plain. 2. Mr. Ogilvy.

Genus Citrus, best specimen...Mr. J. C. Humphrys, as above.

Tender Annuals...Mr. Burke.

PUBLIC GARDENS.

Stove Plants...For the best 6, the first prize was awarded to Mr. Hagerty, nurseryman and florist, Pembroke-road, Dublin, and Wicklow, for Gloxinia rubra and maxima (the luxuriance and beauty of these rare exotics evinced the utmost skill and success in their treatment,) Ceropegia elegans, Justicia elongata, Philibertia grandiflora, and Angelonia pubescens.

Greenhouse Plants, best 6...1. Mr. Hagerty, as above, for Statice sinuata and arborea, Pimelea hispida, Helichrysum proliferum, Sollya salicifolia, and Chorizema ovata. 2. Mr. M'Laine, florist, Harold's-cross.

Pelargoniums, best 6 Dark...Mr. M'Laine, as above, for Hyder Ali, Sir Walter Scott, Champion of Devon, together with three superb varieties raised from seed by the exhibitor, viz. Suwarrow, Desdemona, and one not named.

Ditto, best 6 Light-ground...1. Mr. Daniel Levingston, Ball's-bridge Nursery. 2. Mr. Hagerty, as above.

Ditto, best 6 Mixed...1. Mr. M'Laine, as above, for Niobe, Astræa, Rosetta, Mirabile, Aglae, and Sambo. 2. Mr. Levingston, as above.

Ericas, best 6...1. Mr. M'Laine, as above, for E. ampullacea, jasminiflora, carinata, Hartnelli, Bowieana, and inflata. 2. Mr. Hagerty, as above.

Exotic, best grown specimen...Ditto, for Bonapartea juncea.

Ditto, best flowered...Ditto, for Russellia juncea.

Best 6 Calceolarias, herbaceous...Mr. Levingston, as above.

Mimuluses, best 3...Mr. M'Laine, for M'Lainii, speciosa, and excelsa.

Fuchsias, best 6...Mr. Hagerty, for Standishi, Wormaldi, insignis Gregiana, globosa major, and Wardliana splendida.

OPEN COMPETITION.

Ornamental Plants, unlimited...Mr. T. Maher, as above.

Pelargoniums, best Dark Seedling...Mr. M'Laine, as above.

Ditto, Light Seedling...Ditto.

The former of these seedlings, viz. that with a Dark ground, which Mr. M'Laine has named Othello, in size and regularity of flower exceeds many prize flowers with white grounds, and is decidedly the best we have seen; and the latter, which he has called the Setting Sun, attracted the most marked attention.

Ditto, best 6 mixed...Mr. M'Laine.

Mimulus, new variety, Seedling...Mr. Hagerty.

Fuchsias, new variety, Seedling...Mr. J. Ogilvy.

Picottees, Red Seedling...C. Macnamara, Esq.

Ditto, Yellow...Mr. Edmund Murphy, landscape gardener, Artane.

Premier prize for Picottees, 2 Red, 2 Purple, 2 Rose or Pink, and 2 Yellow, distinct variety...P. A. Fagan, Esq. Mount Pleasant, for Beauty of Hemmingford, Martin's Adelaide, Gild's Enchantress, Gidding's Lady Surrey, Brinkler's Troubler, Wood's Fair Rosamond, Martin's Queen Victoria, Countess Fortescue.

Pansies, 12 Seedlings, new varieties...G. Walthew, Esq. for Belzoni, Widnall's Imogene, Eliza, Trafalgar, Maria, Gaines's Grand Duke, Shakespeare, May's Rival Yellow, Masterpiece, Amato, Carlo Dolci, and Paragon.

The first prize for Native Plants was awarded to Mr. E. Murphy, landscape-gardener, Artane, for a box containing 50 rare Plants, found by one of his sons in an excursion to

Howth and Portmarnock. Amongst them were the following:—Crithmum maritimum, a Triplex portulacoides, Euphorbia Portlandica, Ornithopus perpusillus, Gentiana amarella, Convolvulus Soldanella, Papaver cambrica, Campanula hederifolia, and Lycopodium selaginoides.

An Herbarium, prepared by the same youth, containing upwards of 500 Irish plants, was also produced, for which a first prize was awarded.

August 12. Lichfield Floral and Horticultural Society.—An Exhibition was held August 12. The following is a list of the prizes :—

CARNATIONS.

Scarlet Bizarre...1. Duke of Leeds. 2. Lord Eldon. 3. Hufton's Patriarch. 4. Hepworth's Leader, Mr. Clerk.

Crimson Bizarre...1. Duke of Bedford, Mr. W. Greene. 2. Squire Ray, Mr. Clerk. 3. Lord Milton, Mr. W. Greene. 4. Cartwright's Rainbow, Mr. Clerk.

Scarlet Flake...1. Volunteer, Mr. W. Greene. 2. Bright Venus. 3. Marquis of Granby, Mr. Clerk. 4. Ringleader, Mr. W. Greene.

Rose Flake...1. Elizabeth, Mr. Holmes. 2. Duchess of Gloucester, Mr. Clerk. 3. Coronation, Mr. W. Greene. 4. Ely's Lovely Ann, Mr. Clerk.

Purple Flake...1. Queen of Sheba, Mr. Holmes. 2. Sir R. Peel, Mr. W. Greene. 3. Squire Meynell, ditto. 4. Millwood's Premier, Mr. Holmes.

PICOTEES.

Heavy-edged Scarlet...1. Martin's Prince George, Mr. Clerk. 2. Holmes's Mary, ditto.

Light ditto...1. Miss Smyth, Mr. W. Greene. 2. Marshal Soult, ditto.

Heavy-edged Purple...1. Martin's Regulator, Mr. Elkington. 2. Clerk's Duchess of Richmond, Mr. Clerk.

Light ditto...1. Melpomene, Mr. Holmes. 2. Hutton's Isabella, Mr. Clerk.

DAHLIAS.

Pan of 12...1. and 2. Mr. Lathbury.
Pan of 6...1. Ditto. 2. Mr. Holmes.

August 19. Bath Horticultural Society, Sydney Gardens. *First Dahlia Show.*—The fifth Exhibition of the season took place August 19. Lis of prizes :—

COLLECTION OF PLANTS.

Stove Plants...C. C. Elwes, Esq.
Greenhouse Plants...Ditto.
Balsams...1. and 2. Ditto.
Stove Annuals...1. and 2. Ditto.
Perennials or Biennials...1. Mr. Kitley. 2. Mr. Drummond.

SINGLE SPECIMEN PLANTS.

Stove Plant...C. C. Elwes, Esq.
Greenhouse Plant...J. M. Yeeles, Esq.
Heath...Ditto.
Orange or Lemon-tree...1. and 2. G. Fisher, Esq.
Cockscomb...C. C. Elwes, Esq.

COLLECTION OF CUT FLOWERS.—CLASS I. NURSERYMEN.

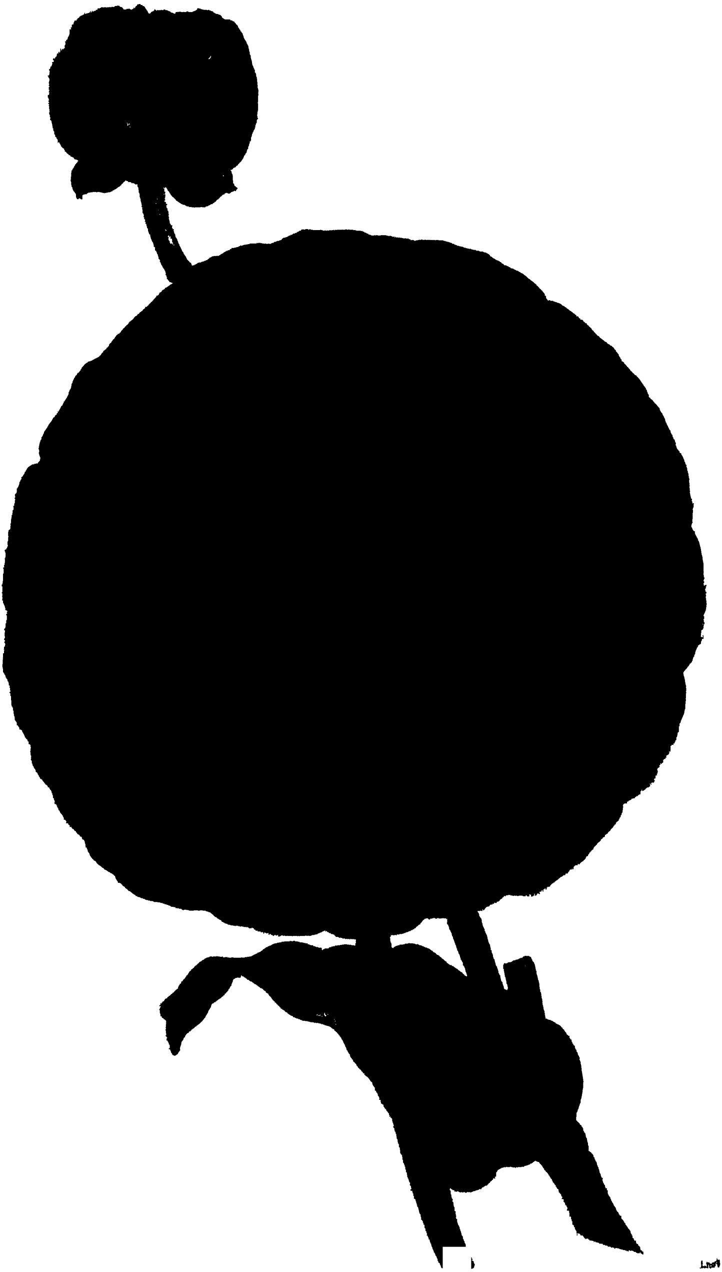
Dahlias, 24 varieties...1. and 2. Mr. Walters. 3. Mr. Wheeler.

CLASS II. AMATEURS.

Dahlias, 18 varieties...1. Mr. E. Davis. 2. Mr. J. M. Yeeles. 3. Mr. Helps.
12 varieties...1. and 2. Mr. H. Collison. 3. Mr. Pearce.
6 ditto...1. Mr. Barton. 2. Mr. Salter. 3. Mr. Barton.
German Asters, 24 in 12 varieties...1. Mr. C. Sainsbury. 2. Mr. Fisher.
Ditto, 12 in 6 varieties...1. Mr. Sainsbury. 2. Mr. Miles.
German Stocks, 24 in 12 varieties...1. and 2. George Yeeles, Esq.
Hollyhocks, 12 varieties...1. Mr. Lawrance. 2. Mr. E. Davis.
Annuals, 12 varieties...1. Mr. Cole. 2. Miss Bayley. 3. Mr. Cole, (of Wellow.)

SINGLE SPECIMEN CUT FLOWERS.

Dahlia...1. Mr. C. Sainsbury. 2. Mr. Edward Davis.
Seedlings, 1840 and 1841, 1 for each...Mr. Hale, of Devizes.
Basket of Cut Flowers...1. Mr. Targett. 2. Miss Bayley. 3. Mr. Pyatt.
Basket of Plants...1. C. C. Elwes, Esq. 2. Miss Bayley. 3. Mr. J. M. Yeeles.
Device in Flowers...T. Emerson, Esq.
Drawings in Fruit and Flowers...Miss Perkins.



THE

FLORIST'S JOURNAL.

November 1, 1841.

ON THE DAHLIA.

WITH A PORTRAIT OF THE "CONQUEROR OF THE PLAIN."

Though the Dahlia is so easily cultivated, and has now become so common, as to be found in every cottage garden, yet it still affords scope for the talents of the floriculturist; and though the varieties are almost innumerable, new ones are produced in abundance every year; and among a number of seedlings, if the seed is taken from good plants, there are generally beauties, and occasionally very splendid ones. Mr. Edward Spary, of Denford, near Hungerford, in Berkshire, has been very successful in growing choice seedlings. On the two previous seasons, he sent out two very fines ones, named "Beauty of the Plain," and "Admirable;" and the variety now figured has been shown, admired, and received prizes at many of the open exhibitions, during the present season; among the rest, the grand exhibition of blooms at Salt Hill: although from the late period of the season at which that show took place, the blooms were much out of condition, and did not show the perfection of their beauty.

To describe in words the colour, or rather the colours, of this splendid Dahlia, is by no means easy, as there are no particular names for the finest of the exquisitely blended tints; but Mr. Holding, our artist, who painted the flower from nature, has done it so much justice with the pencil, that any attempted addition with the pen would be unnecessary, and also a failure. Mr. Spary describes the plant as of fine habit; of four or five feet in height, and with the blooms standing high above the foliage, which gives a most conspicuous effect to the natural beauty of its form and the splendour of its colouring. The form is almost perfect, with great depth of petals, and an excellent rising centre, such as cannot be imitated by any of the usual plugging and trickery sometimes played off, or at least attempted, at exhibitions; and thus it is an excellent show Dahlia. It is a seedling of 1840; and that year it was exhibited at Chichester, and there only, where it received the first prize. In order to prove the fact of its continuing true to its character, it was again brought forward in the present season, met with general admiration, and received many prizes.

In order to obtain compact and handsome plants, and blooms of the finest description, it is desirable to pinch off the top when the plant attains about a foot in height. This makes it throw out many and vigorous side shoots, which may be afterwards thinned out if they appear too numerous ; and if the blooms are intended for exhibition, as many of the neighbouring buds may be pinched off as may appear to be necessary. When the petals begin to expand, they must be protected by shades from rain and the direct action of the sun; because the more exquisite the colours, and the more close and perfect the bloom, it is the more easily injured by either of these.

The Dahlia belongs to the *Syngenesia superflua* of Linnæus ; and to *Ecliptecæ*, the sixth subtribe of *Compositæ* of the natural system. It is named after Andrew Dahl, a Swedish botanist, and was first introduced into Britain in 1789. At first it attracted but little attention, and no great care was taken of it. It was then a flower of variable colours, with a broad disc, and a single whorl of petals. From that time to 1820, there were six importations, all different in the colours of the flowers ; and they are sometimes reckoned six species ; but the probability is, that, like the vast variety of cultivated ones, they are all one species ; and the mode of treating the whole of them is exactly the same.

They are natives of the table land of Mexico, either wholly below the underlimit of frost, or in situations where there is very little freezing, and that not till the stems of the Dahlias have died down for the season. Above 4° of frost, that is, 28° of Fahrenheit's thermometer, they bear all vicissitudes of weather and temperature ; but when the thermometer sinks to 28°, the leaves become blackened; and if the frost continues for a whole night, the plants never rally again for that season, though they may continue to languish as unsightly objects. In consequence of this perfect hardiness down to a certain degree, and speedy destruction when that degree is arrived at, a bed of Dahlias often shows a very remarkable contrast on two consecutive days. During the first of these days they may be all in vigour of growth and fulness of beauty, and on the morning of the second, their leaves may be all black and shrivelled, and their flowers withered and drooping. One circumstance is worthy of notice, and that is, the greater injury that they suffer in low situations than in high ones, even although the latter are considerably the colder. We find, that after a severe night, the Dahlias in a low and humid valley are completely destroyed, while those upon the higher grounds are hardly touched. This shows us that it is not the mere cold, but the humidity of the atmosphere floating in small spiculæ of ice, which does the mischief to these plants. It does this, even though the quantity is too small for forming a hoar-frost, or even a perceptible fog; and the destructive effect is always increased by wind. Thence it is obvious, that the cold damp of the atmosphere is the real cause of the injury; and therefore, if it is wished to have Dahlias late in bloom, and some of them bloom onward till November is pretty far advanced, they should never be placed in situations where damp is liable to accumulate in the atmosphere. All plants which are natives of dry climates suffer from even slight frosts in moist situations. We find this exemplified in the potato, which is a native of the same regions as the Dahlia, and bears some general resemblance to it in habit. Both have vigorous annual stems; and both produce a great quantity of underground substance during the season. Both are also instinct with life, and will form those underground productions at any node or joint of the stems, if they are properly earthed up. There is, however, this difference between them, that the underground production of the potato consists of distinct and separate tubers, which have no crown or general connexion from which a stem can be sent up in the following or any future season. The vitality is in the tubers, and the germs in the eyes of the tubers, and in these only. The potato is therefore a true annual. The Dahlia, on the other hand, though it multiplies greatly in the tuberous or fusiform part, has that part consisting of roots, connected by a crown, which is perennial in the sending up of stems; and no part of the root will produce a plant, unless it contains a portion of this crown,—there being no vitality in the other parts of the root, whatever may be their number and size. Dahlias are not, like the potato, cultivated for the sake of their roots, although these are esculent, but much less farinaceous than even the most inferior varieties of the potato. No attention appears to have been paid to the root culture of Dahlias, although it is highly probable, that, with proper care, they might become substitutes for or additions to the potato, especially as the food of domesticated animals. No doubt, the whole of the large fleshy roots with crowns are less substantial and less nourishing than potatoes; but there is no knowing how far cultivation for the sake of its roots might improve the Dahlia, as the potato itself in its natural state is insignificant, and hardly edible.

Though a rather clear and dry atmosphere is favourable to the Dahlia in its growing season, especially when the temperature sinks to about the freezing point; yet occasional showers do it no harm, even though they are frequent and heavy. This is the case with all thick fleshy or tuberous roots, only it is necessary that they should have good drainage, so that the water may not stagnate about them. Watering, though copious and frequent, agrees with them; but they do not thrive well if they are soaked. We might infer this from the climates and soils which are native and natural to them, especially the Dahlia, and those others of the table land of Mexico. From the lofty hills, many of them rising above the limit of perennial snow, which intersect that table land in chains, or spot it with detached cones, the upper atmosphere is always in a disturbed state, or liable to be disturbed by very slight causes; and though the plains are dry and burned up every season, in the intervals of the regular rains, there are violent showers which thoroughly drench the roots of the plants for a time; but from the great evaporation and the porous nature of the soil, these speedily evaporate, or are drained off through the subsoil,—indeed, through a very great depth of the strata, for these are so rent and shattered by volcanic action, that much of the rain which falls upon them, finds its way in underground channels, and in some places, wells-up through a considerable depth of the sea, in such quantity, as that buckets-full of it may be lifted fresh at the surface.

Upon such a tract of country, the action of the weather is very severe; and it is, in all probability, increased by the great electric tension of the atmosphere, which is more intense and variable in such climates than in any others. The result is a great disintegration of the rocks; and this, with the absence of deciduous leaves and the paucity of surface vegetation, causes the soil to contain an excess of sand, or decomposed stone, which makes it loose and porous. This is exactly the soil which suits the Dahlia; and they who wish to have plants, not overgrown, but in fine condition for blooming, imitate this soil as nearly as possible, and bring it to such a consistency, as that the water may not stagnate and soak the roots, or bind an adhesive soil too closely about them. Dahlias will grow even more vigorously in the individual plant in rich and somewhat adhesive soils, than in such as are light and porous; but the flowering is always inferior, and the stems are tender, and sooner injured by the wind or by cold, than in the case of smaller plants, which grow in more appropriate soils. Perhaps all plants are improved by having the soil in which they are cultivated a little richer than that in which they grow naturally; and probably this enriching requires to be increased, when the plants are carried from a warmer to a colder climate; but these are points which can be determined only by the practical cultivator, and even he must be careful not to exceed the proper measure. If the natural soil is very wet and retentive, an underground drainage becomes necessary; and brick and lime rubbish is a very good material for this purpose. This drainage must be placed so far down, as that the roots should not reach it; but lime rubbish makes a good ingredient in the soil wherein the plants are immediately grown. This soil should not be finely pulverized, nor should its surface be too smooth; but it ought to be kept as open as possible, in order to admit the rain to drain off, and air and heat to have access to the roots. This is essential to the successful growth of plants which have large fleshy roots; for if these are cramped, and not properly stimulated, the growth of the plants, and especially the flowering, are always inferior.

In their native country, Dahlias hybernate or take their repose in the ground; but that plan does not answer even in the most favourable soils in this country. If the crowns of the roots are too near the surface, they are in danger of being killed by frost; and if they are too deep for being hurt in this way, they are liable to be weakened, soddened, or even rotted by the moisture; should they escape these casualties, the flowers gradually deteriorate, becoming smaller in size, and inferior in colour, till they ultimately degenerate to their natural state, with only a single whorl of petals. They do this more rapidly in proportion as the soil is less fitted to them; but they do it in all soils, and the same is the case with bulbous roots which are natives of climates which are more warm and dry in winter than that of Britain. With these bulbs, as well as with Dahlias, our winter is a sort of Scylla and Charybdis, or, more frequently, an alternation of both; for both the frost and the rain destroy the roots, and the destruction is increased when they alternate with each other. It is for this reason that Dahlias should be taken up as soon as the roots have ripened, which is always a little later than the natural dying down at the stems; and if the stems are destroyed by a premature frost, they should be cut down, and the ground covered for some time with light and flocculent matter, until the roots are fully ripened; for if they are unripe, they are apt to shrivel, and do not grow well in spring.

Some observations on the propagation and culture of Dahlias have appeared in former numbers of the "Florist's Journal," so that we need not repeat them here; but the general remarks which we have made on their native soil and climate, and the soil which suits best in this country, may be found useful, especially to those who have little knowledge of the geography of flowers. Indeed, the finding of a proper soil is one of the most important matters in Dahlia cultivation; for if that is obtained, the growth of the plants is so free, as scarcely to require any attention. When the roots are ripe, they should be taken up, and not dried too rapidly at the first; but care should be taken that they are not in a place so moist as to mould or rot them, or so warm as to start them into premature action, unless they are to be brought forward in shelter and by artificial heat. This is the best way to obtain fine plants; as cuttings of these early growing ones, if carefully struck, and protected until all chance of frost is over, yield superior blooms the same autumn, to young plants obtained in any other way. There is not, however, one Dahlia grower out of every hundred, who has the means of doing this; and all who have not must attend to the outdoor culture. In this, it is advisable, as we have said, to take care that the roots are not stimulated too early in the spring; and besides this, the plants come up more hardy, and less liable to be injured by frost, if kept during the winter in as cool a place as they can bear, only it must not be damp. Before they are put in the ground, they should be allowed to show bourgeons from the eyes in the crowns of the roots; but no more than one bourgeon must be left on each division of the crown, unless the lateral ones are to be twisted off and struck for additional plants, after they are advanced so far in growth. These are easily struck, and they come into flower as early as those which are left on the original root; and a Dahlia always has a bad appearance, if it has more than one root stem. The more it branches above this, it looks the more handsome; and, as remarked by the grower to whom we are indebted for our illustration, this branching is much promoted by pinching off the tops when the plant is partially grown.

CONDUCTOR.

REMARKS ON THE CHOICE OF PLANTS FOR A GREENHOUSE.

BY W. SHERWOOD, GARDENER TO MRS. FRASER, CAMPDEN HILL.

SIR,—The following remarks have reference only to small suburban and other residences, where the only house for plants is a greenhouse, and consequently only what is termed 'Greenhouse-plants' are kept.

Premising that the proprietors of such establishments form a considerable portion of your numerous readers, and this being the time for getting in the plants, it may not be uninteresting to give the names, the mode of managing, and a brief description of some of the species, which will succeed each other in producing flowers throughout the winter as well as summer. I am induced to offer these observations in consequence of having often seen small greenhouses filled with old hardweeded plants, such as Myrtles, Diosmas, Melaleucas, Neriums, Eugenias, two or three Camellias, (which often produce flower-buds but no flowers,) an almost leafless Orange-tree or two, and a few Geraniums, standing crowded together in front of them. Such a selection as this I am sure could not have been made by any person, whose object was to perpetuate the development of the beauties of nature, which can be effected by the cultivation and proper management of the following plants. The plants in bloom now (October) are scarlet Geraniums; the cuttings should be struck in June, the plants shifted as they require it, the flower-buds pinched off as soon as they appear, until September, when they may remain; these will continue in flower till December. The best kinds for late flowering are Shrubland, Cooperii, and Old Frogmore. Lechenaultia formosa, scarlet, flowers from March till December, should be grown in sandy peat, and treated the same as heaths. Alonsea linearis, scarlet, soil, peat and loam equal parts. Lobelia gracilis, blue, light soil. Salvia fulgens, and S. splendens, both scarlet. Primula sinensis: the young plants which flowered last spring were taken out of the house in May, and placed in a cool situation in the garden, where they remained until the middle of August; they were then potted in larger pots, put in a frame, and shaded in very hot weather, are now in flower, and will continue so until the spring, when they will be succeeded by those sown in June last; soil, equal parts of loam, peat, and leaf-mould; white sand added if required. Gesneria splendens, scarlet; should be kept dry when done flowering till the spring. *November.*—Camelias, Old White, Chandlerii, Old Stripe, Lady Hume's Blush, Caroline, and Colvilii: most of these will flower through the winter. The best time for shifting them into larger pots is just previous to their making their new shoots, at which time they should be well supplied with water; they should remain in the house until the young wood is hardened, and the flower-buds formed. The situation for them out of doors, should be one that will afford shelter from cutting winds, and a partial shade during the hottest part of the day; soil, half light turfy loam, one-fourth peat, and one-fourth leaf-mould, with a little white sand, all well mixed. To keep Camelias healthy, they should be shifted and watered *only* when they *do* require it. *Heaths.*—The following varieties succeed well in a greenhouse, and flower the whole of the winter months. Erica gracilis, E. cruenta, E. cubica, E. verticillata, E. hymalis, E. flammea, E. Irbyana, E. cerinthoides, E. pellucida, E. Bowieana, E. rubida, E. Linnæoides, should be grown in sandy peat, kept in the coolest part of the house in the spring, and placed in a shady situation in the summer. Great care is required that the roots do not get dry. *December.*—Epacris grandiflora, E. impressa, and E. rosea, will flower from this time till April: should be treated the same as heaths. The leading shoots should be kept well stopped when young, to prevent them becoming naked at bottom. It is a good plan, in hot weather, to place the pots in others of a larger size, and fill the space between with moss, which, if wetted when the plants are watered, will tend to preserve a regular moisture at the roots, than which nothing is more essential to their well being. *January.*—Cinerarias, particularly the shrubby kinds, will be coming into flower at this time. It is best to get young plants from cuttings in June. The herbaceous varieties, such as Hendersonii and cruenta, if turned out into the ground in May, will make plenty of offsets fit for parting singly in August; soil, two-thirds peat, one ditto loam. *February.*—Pimelia decussata, pink; soil, sandy peat. *March.*—Acacia armata, Azalea Indica alba, A. Smith's coccinea, A. grandiflora purpurea: these should be shifted into larger pots when done flowering, if they require it, and grown in peat. Genista Canariensis, Cytisus racemosus, both fragrant. *April.*—Herbaceous Calceolarias, followed by shrubby ditto, Geraniums, and Fuchsias. Any instruction as to the culture of either of these would be quite superfluous to the readers of the Florist's Journal.

There are a great number of other plants which deserve a place in the greenhouse, but those I have mentioned I consider indispensable where ornament is an object.

For the general management of all, let the pots be well drained, worms carefully excluded, air given every fine day, fires made only to expel damp and frost, water given in the morning, when necessary, and the plants frequently turned round, that all parts may enjoy the light. And, instead of the whole collection being turned out on some one particular day, which is frequently done, let the time be regulated by a regard to the nature and habits of each species; for until men who have the charge of plants, have made the natural locality of each an object of their study, not only in reference to latitude, but also altitude, it will be in vain to look for well-grown specimens as the result of such blind-hazard treatment. This cannot be expected of men who fill gardeners' places, and receive labourers' wages.

October 16th, 1841.

ON THE CULTIVATION OF THE EPIDENDRUM.

BY MR. DON.

This is a singular and beautiful genus, well deserving the careful attention of the cultivator of *Orchideæ*, and one that will repay him for all the trouble that he can bestow upon it, in a profusion of the singular and beautiful flowers. Some of the species are caulescent, while others are pseudo-bulbous; and it is a very variable genus, in respect to its habits of growth, and also in the form of the flowers.

The mode which I should recommend for the successful cultivation of *Epidendrum*, is, that the plants should be either grown in pots or baskets, filled with equal portions of turfy peat and sphagrum, cut rather small, and well mixed together. A very few potsherds will answer to be put at the bottom for drainage. With regard to the size of the pots, the cultivator will be guided by that of his plants. In planting them, the pots should not be filled above the rim, as they do not require to be elevated, as in the case of *Stanhopeas*, and other genera, of which the flowers grow downwards, as all this genus are upright-flowering plants. In putting them in baskets, no potsherds are required; but some long moss should be laid along the bottom and round the sides, so as to prevent the smaller portions from getting through. When the plants are growing, they should have gentle waterings, so as to keep them always moist, but not wet. In their season of growth, the house in which they are grown should be kept up to the point of saturation with moisture, and at a heat ranging from 60° to 100°, and they should be well shaded. But in their season of rest, they should be kept rather cool and very dry;—their season of rest of course means when they have fully completed their growth, and their pseudo-bulbs and stems have become firm and fully swelled; and when they again show signs of eitheir flowering or growing, they should be moved out of the resting-house into the growing one, and no water should be given to them for a month or six weeks. After that, they should have gentle waterings till such time as they have again completed their growth. When resting, as little shade as possible will be required, unless in very hot weather.—I shall now enumerate some of the principal species.

Epidendrum cochleatum is an old inhabitant of our stoves; but it is a singular and beautiful species. The sepals and petals are linear, and thrown back so as to leave the lip quite free, so that it has the appearance of a small shell, which its name implies. The sepals and petals are greenish yellow, with a few spots; and the lip is dark purple, with a little yellow. It is a native of various parts of the tropics; was introduced in 1786; flowers the whole year round. It is of easy culture; there are a great many varieties.

Epidendrum fragrans is a very pretty species, and also very fragrant. It is somewhat, in the form of the flowers, like the last, the sepals and petals spread out, but are not thrown back as in that. They are of a greenish white, with a few brown spots. The lip is white, with purple stripes. The flower-spike rises from the centre of the pseudo-bulb, which is somewhat club-shaped, with two lanceolate leaves. A native of the same regions as the last; introduced into Britain in 1778.

Epidendrum cuspidatum is a very fine species. The pseudo-bulbs are elongated and club-shaped, with two to three ovate lanceolate coriaceous leaves at the top. The flower-stems proceed out from the centre of the pseudo-bulbs. The stem produces from five to ten flowers, which are white; the sepals and petals are greenish yellow, linear, lanceolate and spreading. The lip is white and ciliated, or beautifully fringed, which gives the plant a lovely appearance; and is also a very free flowerer. Before the flowers go off, they change from a white to a brownish yellow. A native of the West Indies; introduced in 1808.

Epidendrum ciliare.—This species has somewhat the appearance of the last named; but it is much smaller in all its parts. It is a very handsome species, and a free flowerer. The pseudo-bulb is elongated and club-shaped; and there are two ovate leaves at the apex of the pseudo-bulb, but much shorter than in that of *cuspidatum.* It is a native of the West Indies; introduced in 1790.

Epidendrum bicornutum, (two horned).—This is a very singular and beautiful species. The flowers are white, like ivory, and somewhat spotted; the pseudo-bulbs are hollow, and thickened towards the base; and each pseudo-bulb has three to four ovate lanceolate leaves near the top. The flower-stem rises from the apex of the pseudo-bulb, and bears from five to twenty flowers on it, which are of a beautiful shining white. It is a rather scarce plant, and somewhat difficult to cultivate; and it is very apt to go off after it has completed its pseudo-bulbs, and more so if it is kept a little moist after it has finished its growth. A native of Guiana and Trinidad; introduced in 1834.

Epidendrum Schomburghii.—This species is named in honour of that interesting traveller, Mr. Schomburgh, who found it growing on trees, exposed to the sun. It is a splendid species. The flowers are scarlet, and beautifully fringed; the stem is somewhat caulescent, or much elongated; the leaves are ovate and lance-shaped, and alternate on the stem, of a reddish green colour; and the flowers are large and rich coloured. This deserves a place in every collection; but is yet very scarce, although it has been in the country some time. A native of Guiana; introduced in 1836.

Epidendrum Skinneri is another beautiful species, and, like the last, deserves a place in every collection. This is also a somewhat caulescent species. The leaves are lanceolate and pointed; the flower-stem rises from the apex of the pseudo-stem, and produces from five to thirty flowers on each stem; they are very large, and of a beautiful purple; and they have the advantage over many of the other species by lasting many weeks. A native of Guatemala; introduced in 1835.

Epidendrum cinnabarinum, (cinnabar flowered).—This is another caulescent species. The leaves are numerous on the stem, ovate, lanceolate, pointed, of a reddish green, and alternate. The flowers are of a rich cinnabar colour; the spikes bear from five to forty flowers when the plant is grown strong. It is a most desirable species, and a free flowerer. A native of Guiana; introduced in 1839.

Epidendrum alatum (winged-columned.)—A very pretty species. The sepals and petals are coriaceous, of a yellowish green; the lip is yellow and brown; the pseudo-bulb is ovate; the leaves are long, lanceolate, and recurved, two to three to each pseudo-bulb; and the flower stem is long and very much branched. A native of Mexico; introduced in 1836.

Epidendrum macrochilum (large lipped.)—The pseudo-bulb is ovate, and sometimes round, very large; the sepals and petals are lance-shaped, coriaceous, of a yellowish green; the lip is of a beautiful red; there is a variety, with a white lip, from Demerara. The leaves are broadly lanceolate, stiff or rigid, of a very dark green. This I consider one of the most beautiful of the genus, beautiful as many of them are. A native of Mexico; introduced in 1836.

Epidendrum altissimum.—This is a noble species, when well grown; the pseudo-bulbs are large, something like a *Cyrtopodium*, but more round in its form, and of a very firm texture, being almost like a piece of hard wood, of a brownish green. The leaves are long, lance-shaped, and of a firm texture, two to three to each pseudo-bulb. The flower spike is much elongated, and very much branched; the flowers are numerous; the sepals and petals are linear, lanceolate, and coriaceous, of a yellowish colour; the lip is yellow and brown, and very much waved, which adds much to the beauty of the flowers. A native of the Bahamas; introduced in 1836.

Epidendrum aromaticum (aromatic.)—The pseudo-bulbs are round and very large, with one to two leaves to each; the bulb is linear, lanceolate, and recurved; the flower stem is very much branched, and bears a profusion of beautiful yellowish-white flowers. The sepals and petals are very linear and waved; the lip is very narrow and rather long, and much crisped. The flowers are very strong scented, and very agreeable. It is really a lovely species, and deserves to be in every collection; but is still very scarce. A native of Guatemala; introduced in 1834.

Epidendrum Phœnicium (pretty.)—This is a pseudo-bulbous species. The pseudo-bulbs are not very large, and somewhat ovate; the sepals and petals are of a greenish brown; the lip is brown, green, and pink. It is a most profuse flower; the flower stem is much branched and pendulous. It is altogether a handsome species, and deserves to be in every collection. A native of Demerara; introduced in 1834.

Epidendrum oncidioides (oncidium-like.)—Pseudo-bulbs ovate, shining, and smooth; leaves two to three to each pseudo-bulb; broadly lanceolate, and somewhat recurved; flowers and stems long, and very much branched; flowers numerous, rather large, and spreading, in form very like the *Oncidium* flowers; the sepals and petals are brown, the lip yellow. This is a splendid species, and very distinct, although it is often confounded with a variety of *Odoratissimum.* It is very scarce. A native of South America; introduced in 1823.

Epidendrum variegatum (variegated.)—A pretty species. The pseudo-bulbs are club-shaped, of a pale green colour, with two to three lance-shaped leaves, pointed; the sepals and petals are coriaceous, greenish, with purple spots; the lip greenish white, with purple stripes. An exceedingly neat species, and well worth cultivating. A native of Brazil; introduced in 1837.

Epidendrum pastoris (shepherd's.)—Another pretty little plant. The pseudo-bulbs are somewhat in the form of *Variegatum*, but much smaller and more round, with two linear leaves, pointed; the phigoma is also much shorter than in *Variegatum*, and the leaves are very flaccid; the sepals and petals, green; the lip is yellow. A native of Mexico; introduced in 1834.

Epidendrum sellegarum (side-saddle.)—Flowered, pseudo-bulbs ovate, green, smooth, with two leaves somewhat erect, lanceolate and pointed; the sepals and petals are round and coriaceous, and somewhat spatulate with a murous point; the lip is formed like a side-saddle, with the two wings of the lip bent back; the flowers spirous, upright; they are not very numerons, but very large. There are two varieties of the species; one with the sepals and petals green and brown, and the lip purple, the other with the sepals and petals greenish yellow, and the lip white. A native of Guatemala; introduced in 1835.

Epidendrum lacerum (torn or jagged.)—A curious species, having the lip cut as if it was torn; the pseudo-bulb is not large, and it has two leaves, which are rigid, lance-shaped, and coriaceous; the sepals and petals are of a pinkish green, and the lip is pink. A native of Mexico; introduced in 1835.

Epidendrum pictorum (painted.)—This is a very fine species; the pseudo-bulbs are large, ovate, with two leaves, recurved, lance-shaped, and rather broad; the flower spike is large, and much branched, and numerously flowered; the flowers are yellow, spotted with brown, about the size of *Oncidioides*. A native of Demerara; introduced in 1837.

Epidendrum armeniacum (apricot coloured.)—This is a caulescent species; the stem is short and rather flat, two edged; the flower spikes are short, and the flowers are small and very numerous on the spike; the leaves are lanceolate and acuminated. A native of Brazil; introduced in 1833.

Epidendrum crassifolium (thick-leaved).—Stems much elongated, leaves ovate, somewhat caudate at the base, and pointed, smooth and shining, many on the stem, and alternate ; the spike of flowers is somewhat crowned, and of a beautiful lilac colour ; the lip is lacerated and jagged, which gives the flower a pretty appearance. A native of St. Vincent ; introduced in 1824.

LIST OF SPECIES.

Epidendrum coriaceum, green and purple, Demerara.
rhyzophorum, green and purple, Guatemala.
Candollei, brown, Mexico.
virescens, green-yellow, Dominica.
pumilum, pink, East Indies.
viridi - purpureum, green - purple, Jamaica.
vesicatum, greenish white, Essequibo.
lividum, purple, South America.
dichotomum, purple, Demerara.
ionasmum, red-green, Essequibo.
cauliflorum, striped, Brazil.
Eugenitans, brown, Vera Cruz.
tridactylum, yellow, Brazil.
longicolla, yellow, Demerara.
cucullatum, white, Para.
pachyanthum, green, Guiana.
varicorum, brown, Guatemala.
Smaragdinum, green, Demerara.
asperum, yellow, Mexico.
chloranthum, green, Demerara.
tessellatum, brown-green, Guatemala.
papillorum, green-white, Guatemala.
Boothianum, yellow-green, Cuba.
calamarium, yellow-green, Brazil.
uniflorum, yellow-green, Mexico.
Stanopetalum, red, Jamaica.
Glumaceum, white, Brazil.
secundum, red, West Indies.
floribundum, white-green, Mexico.
verrucosum, striped, West Indies.
umbellatum, green, Jamaica.
nutans, green-white, West Indies.
diffusum, green, West Indies.
nocturnum, green - white, West Indies.
fuscatum, brown, West Indies.
elongatum, red, Caraccas.
pellidiflorum, striped, West Indies.
ellipticum, scarlet, Brazil.
gracile, yellow-purple, Bahamas.
adonatissimum, green, Brazil.
patens, brown-white, West Indies.
conopseum, striped, Florida.
rigidum, striped, Dominica.
ochraceum, striped, Guatemala.
bifidum, purple-yellow-green, West Indies.
clavatum, white-yellow, Cumana.
chloroleucum, white-green, Demerara.
Harrisoniæ, green, Brazil.
æmulum, white-purple, Para.
pygmæum, red-green, Brazil.
filiforma, purple, Guatemala.
crispatum, green-white, Mexico.
pliatum, green-purple, Demerara.
carnaticum, green-purple, Guiana.
seriatum, whitish green, Mexico.

KNOWLEDGE AND USE OF FLORICULTURE.

BY J. M^c^DONALD.

SIR,—Though floricultural publications be numerous in Great Britain, and varied in appearance, in kind, in quantity of matter, and in price, yet I believe there is none of them destined to become so well known, or so long-lived, as the Florist's Journal, a publication within the reach of all, and calculated at once to please the intelligent and refined, and to instruct and improve the tyro. True, other publications contain abundance of instructions and directions for growing most kinds of plants to extraordinary perfection; but in general, it would, I believe, greatly puzzle the writers of these articles to put their own receipts in practice three successive times with good success, because their directions are founded, not on physiological or philosophical observations, but on arbitrary or hap-chance fortuitous circumstances; while the rules given in the Florist's Journal are based on philosophical principles, that have been in force since plants have been in existence, and which will continue as long as flowers expand. Therefore, the wonder is, not that that publication is taken in by most lovers of flowers, but the wonder will soon be if any admirer of nature takes it not. As it is, I know it has a good circulation in this part of the country, and that many of the landed gentry take it in. Knowing this, has induced me to send these few lines for insertion—should you deem them worthy of the honour—in your excellent work; not with the vanity, however, of believing that this article contains anything excellent in itself, but in the hope that it will attract the notice of some abler writer to the subject of the moral improvement of society, by the diffusion of a love for, and an understanding of the goodness and bounty of the Creator, as displayed in nature, and more especially in flowering plants. Much has been said about, and many modes have been devised for, the moral improvement of society. The anathemas of the bigot, the dogmas of the sectarian, and all kinds of pulpit thunder, have, for ages, been employed in the noble work. The philanthropic have devoted their lives, and the benevolent their means, for the same end. Churches have been thickly planted, and sabbath-schools established in every village; yet the anticipated results have not followed. Bridges prematurely dilapidated, milestones wantonly defaced, and denunciatory placards exhibited in every plantation, are but a few of the signs of a still existing barbarism. In fact, the much boasted intelligence of our peasantry is only of the grossest kind, and very far short indeed of the refined nature, that is best calculated to make a man either a proper father or neighbour in this world, or to give him proper ideas of the next. Nor is it strange it should be so; the mode of education hitherto adopted has always had a greater tendency to enslave the mind than to instruct it—at best, it has been like teaching a person to read a book before teaching him the alphabet.

Who does not allow that early impressions are powerful and lasting? Who has not seen the hearty, joyful avidity with which children gather wild flowers? Who has not observed that in general the adult, who still retains that innocent first love of nature, is more intelligent, more refined, and more humane, than those who have retained it not? Who that has made the experiment with the wild roving urchin, who greedily, roughly, and regardlessly plucked every flower that came in his way, of telling him the names and properties of flowers, but has observed, that with the information, his love for flowers increase, and *respect* for them begin; that the plant he would formerly have trampled on, or roughly plucked to throw immediately away, was now respected and left uninjured? Here, then, a double good is easily achieved, a desire for knowledge established, and a tendency to wantonness checked. Here, then, a simple pleasant effort shows more signs of future good fruit, than does many of the splendidly conceived day-dreams of the lofty enthusiast, or the schemes of the scholastic pedant. Nor need the clergy—who are in the habit of inculcating the doctrine, that passiveness as regards this world, and a belief in some particular creed as regards the future, is the full sum of our duties—fear, that thus encouraging a love for nature's beauties will make men bad. Oh no; "any pursuit which makes men acquainted with the peculiarities of vegetable economy, in however small a degree, has a beneficial effect upon the mind and understanding."* And if, instead of shutting public gardens, and trying to prevent the city artizan from taking a breathing of the country on sabbath days, more parks and gardens were added to every town, the moral improvement of the people would be far more promoted, for it is scarcely possible to admire nature without looking up to nature's God. It is as little possible for the artisan, who works hard during six days of the week, not to seek enjoyment on the seventh ; and what is denied him on the one hand he will have on the other—if he be not allowed to enter into a garden, he will enter into an alehouse. And I leave it to the zealous conservators of sabbath-day sanctity to decide whether a walk in a garden, or a seat in an alehouse, be most conducive to sabbath preservation, and the moral improvement of society. I shall leave it to the country proprietors to decide whether miserable huts, such as disgrace many a fair estate in Britain, or neat cottages, be most ornamental to their estate—most likely to attach the working people to their landlords, and most honourable to themselves as umpires of the working classes' comforts and happiness.

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* Rhind's History of the Vegetable Kingdom.

In my humble opinion, the first step towards the moral improvement of town populations ought to be—to amply provide means for rural recreations. And I am convinced, that to make the country peasantry intelligent and happy, the only best way will be found to be to give them comfortable neat cottages with gardens, where practicable ; at all events there ought always to be some suitable plants trained up on the fronts and ends of these cottages, and a border, thirty or thirty-six inches wide for them to grow in, railed in so that children might neither trample the ground nor injure the plants. The plants in general ought to be exotics, so as to stimulate the cottager to make inquiries about the native country of the plant, or if he knew something of it already he would be anxious and proud to rear, in this country, plants naturally inhabitants of a distant and dissimilar one.

It would be requisite, of course, to give small prizes to the most successful cultivator, (all circumstances duly considered ;) but instead of pecuniary rewards, I think books would be best—these ought not always to be merely religious ones—but such as Pinnock's Catechisms, Joyce's Scientific Dialogues, a volume of Chambers's Edinburgh Journal, or their Information for the People, Dr. Neil's Treatise on British Horticulture, Rhind's History of the Vegetable Kingdom, the forthcoming work on the

Geography of Flowers, by the conductor of the Florist's Journal, Paxton's Botanical Dictionary, &c., as the case might deserve. Giving a fair trial to some such plan as this would soon, I am well convinced, make it evident to the aristocratic and wealthy, that it is the easiest and shortest way for making the peasant content with his home, intelligent, and intellectually happy. But I will for the present conclude by giving a short list of such exotics as flower well with me on a wall, having an eastern aspect, without any covering, and at a height of upwards of 700 feet above the sea, in a cold inland part of Scotland.

Cydonia Japonica flowers abundantly and splendidly.
Wistaria Sinensis, ditto ditto.
Leycesteria formosa has attained a height of about 8 feet in two years, and blooms abundantly.
Robinia hispida blooms profusely, but as it is apt to get bare and unsightly at bottom, I have an
Anagyris indica planted so as to cover such defect, and replace it altogether when it becomes very unsightly.
Rosa Bengal florida, reached a height of 17½ feet last summer, (it was only planted the previous autumn, a small plant;) it has stood last winter's frost uninjured, and this season it has borne, on numerous lateral branches, abundance of very large roses.
Rosa microphylla alba adorato grows luxuriantly and blows well.
Rosa Adelaide d'Orleans stands the severest frost uninjured.
A white moss (planted two years—a small plant then,) had 227 full formed buds on it at one time this season, almost all of which have blown, or are blowing, notwithstanding the variable and excessive moist nature of the season.
A blush noisette has many hundreds, I might perhaps with truth say thousands, of flower buds and flowers on it.
Grevillia ruga, &c. blooms profusely and splendidly.

Aristolochias and Ribeses might be added to these, as suitable for cottage decorations; and Fuchsias, Salvia patens, Gladiolus cardinalis and floribunda, Alstrœmeria aurea, Lilium, tigrinum candidum, and Czackia liliastrum, &c., might be planted in the area of the border, and as they all die down to the ground in winter, the simple precaution of covering the border with a thick stratum of leaves, would amply suffice to protect them, and the *life knot* of the wall plants, from the inclemency of the severest winter. To the list of wall plants I might have added Tree Carnation, Calampelis scabra, and Maurandya Barclayana, as the former has stood uninjured here during last winter, and has now a number of flower-buds on it; and the other two, though seemingly entirely destroyed, have sprung up, and are now flowering freely. But I consider these can never be depended on as wall plants in this country during very bad winters, though their roots be ever so well protected from moisture by boarding, or any such means.

With best wishes for the success of the Florist's Journal, and best respect for yourself as conductor,

I am, Sir, your obedient Servant,

J. M^cDonald.

The Vale, Peeblesshire.

THE WEATHER FOR OCTOBER.

The weather during this month has been a continual succession of cold winds from the westward, and heavy, but not continuous falls of rain, with occasional frost, though of no great severity, toward the close of the month. Such weather has been very unfavourable to the autumnal bloom, especially of the finer sorts of flowering plants. The roses have not been able to open their petals, but have been discoloured by the rains, and thus have presented an unseemly appearance, instead of that beauty which they display when October is fine. The herbaceous plants have also suffered in their bloom, and their stems have been disfigured by the winds; and though the weather has been otherwise favourable to the roots, this premature destruction of the leaves and stems has been against their ripening. Many of the Dahlias, and other natives of elevated places within the tropics, have suffered a good deal in their leaves and stems, especially in low and humid situations, which are the very worst for them to be in, when even slight frosts alternate with heavy rains in October. Shrubs, except very tender ones, have suffered much less, and the strength of shoots is perhaps greater than if the summer had been a warm and dry one. It is also probable that both they and the perennial roots will be more secure in case of an early winter, of which there is much probability, than if the summer and autumn had been more dry and warm. Altogether, the outdoor ornamental plants have suffered a great deal, and their beauty for the year is almost over; but there is some probability that their growth and appearance next year may be increased by this approximation of the last month in autumn to the character of the beginning of winter. The absolute quantity of rain has not been so great as it often is, when the month appears more dry; and it has not been of that soaking kind which sinks deeply into the earth and stagnates the air, to the great injury of the roots of plants. The heavy falls have, however, caused a great flooding of many of the water-courses, though these floods have not continued so long as the floods resulting from soaking rains. In the south-eastern parts of England especially, the land floods in the lower valleys of the rivers have been augmented by high tides of the sea, which at London-bridge rose three or four feet above the Trinity high-water mark, and laid some of the low streets under water. These high tides were brought about by a violent gale from the south-west, which drove the south tide strongly up channel, and the north tide strongly south, to the British ocean. The momentum which those tide waves acquire, makes them rise higher toward the line of confluence than they do any where else, and as the southern tide comes more directly from the Atlantic than the northern, the line of meeting which is usually to the south of the Foreland, is forced to the north of it, and causes a high tide in the Thames, notwithstanding that in the channel of that river the wind is probably against it. Floods, such as that which has occurred, are favourable to the meadows, from the deposits which they leave ; and they do not continue long enough for injuring the more kindly meadow grasses. The floriculturist has but little immediate concern with these floods ; but still, seasons which are favourable to the roots of grasses are equally so to most flowering plants which, like the grasses, have annual stems and perennial roots. It will depend somewhat on the character of November, whether the increase of growth, in roots, twigs, and the formation of buds, shall come to fully-ripened maturity, so as to give an ample bloom and an abundant fruiting next season, but the foundation for both is better laid than if autumn had been more warm and dry. About the end of September and the beginning of October the barometer was exceedingly low, but it rose with great rapidity, though the rise did not continue.

CALENDAR FOR NOVEMBER.

Stove.—The treatment here must be brought in unison with the season. The plants will require a much smaller quantity of water than last month ; it should be given in the morning. Use every endeavour to ripen the wood of late growths. Crinums, Amaryllideæ, and other bulbous-rooted plants, should have a perfect rest at this season. A little air is of much benefit whenever it can be given safely. The medium temperature should be about 65° ; the variations should never exceed 5° either way. Cleanliness is indispensable now.

Greenhouse.—Every opportunity should be taken of admitting air. Should the weather continue damp for three or four days successively, a little fire heat will be necessary. Australian and Cape plants and roots must be kept as dry as may be prudent ; if mildew appears, strew a little sulphur on the parts infected, and set the plant in a sunny part of the house ; in short, no more water should be given to any plant than is just sufficient to keep the vital principle in action—with two exceptions, namely, Camellias and Chrysanthemums ; these must have rather a copious supply. Fumigate every fortnight or three weeks. Keep every thing clean and neat; the medium temperature should be from 45° to 50°.

FLOWER GARDEN.—Dahlias that are yet standing out should be got up without delay. Roses, Lilacs, Kalmias, and other flowering shrubs, may now be potted for forcing next season, and those already in pots should be placed in pits. Finish planting Tulips, Hyacinths, Crocuses, &c., also potting the same for forcing; those potted last month should be put into a pit or frame. A few Ranunculus and Anemones may be planted for an early bloom.

Auriculas must be particularly attended to; keep them clear of drips; pick off dead leaves; water them very sparingly.

Carnations and Picottees must be protected from heavy rains and snow; the best covering is that we recommended last year, viz. a frame open at the sides, or the lights placed on poles a little above the stage on which the plants are placed. Finish the autumnal planting and removal of trees and shrubs as early as possible. Flower-beds and borders should have the soil renovated wherever it is required. Tender shrubs will require some protection towards the end of the month.

FLORICULTURAL INTELLIGENCE.

THE WEST LONDON FLORICULTURAL ASSOCIATION FOR MUTUAL IMPROVEMENT.

THIS Association, many of the members of which are well skilled in the theory, and expert and experienced in the practice, of the art to which their time and their talents are most assiduously devoted, is so appropriate in its name, and so true to that name in its practice, that it deserves to be generally known to professed gardeners and amateurs all over the country, and, indeed, to every body, in order to induce them to join the one or the other of these classes, or in some way promote, to the best of their power, a subject which affords the lovers of it a most extensive, varied, sweet, and innocent enjoyment. We may say with justice that it is superior to every other institution or association among men who live on the fruits of their own labour. We waive the societies of men who consider themselves philosophers, artists, or professionals of any description, and merely notice the society or associations of working men. Of these, mechanics' institutions are the most numerous, there being at least one in every town of even very moderate magnitude. But they are one and all misnomers, and have no more to do with the teaching of mechanics, theoretical or practical, than they have with the Hebrew Bible or the Chinese alphabet. They have halls of meeting, most of them have libraries, and some have a few philosophical instruments and models; but the last are only toys to look at, the second contain ten volumes of amusement for every volume of science, and the first have nothing to do with mechanics. They are popular lecture-rooms, in which itinerant holders-forth exhibit themselves, and these rarely meddle with any science, or if they do, they merely touch the surface, and say nothing that can instruct any part of the audience. Phrenology, Daguerrotype, and other matters of mere mouthing and marvel, which are useful to nobody, are the stock subjects wherewith they go about to illuminate mechanics. We readily admit that the said mechanics are far better attending such lectures as even these than they would be in the alehouse; but the betterness is in purse and health, and not much in mind.

As for the Floricultural and Horticultural Societies, again, they do not instruct each other, or state their modes of treating plants to the assembled members, so as that these may be commented upon, and added to the general stock of knowledge when they are worthy of it. Then, as for the shows of flowers and other productions of the garden, they no doubt encourage a taste for the growing of fine flowers; and every candidate for the prizes exerts all his skill and art, in order to bring to the show the finest specimens. Many of those specimens are splendid, and none are mediocre, and thus much labour, and many unsuccessful attempts, must occur before the choicest beauties are produced. But, in so far as the show and the showers are concerned, this labour and those experiments are lost to the profession and to the public, because no account is given of what was done, or of the reasons for doing it. If every exhibitor were bound, by the laws of the Society, to give an account of the natural habit and habitat of his plant, and detail the operations through which he went in order to bring it to the state of perfection in which it is shown, the show would be, what it ought to be, a very delightful meeting for instruction. It is probable that, if this were to be required, the number of plants and exhibitors would be diminished, but the knowledge communicated would far overbalance this deficiency.

But though this blending of information with a flower exhibition would be very desirable, we doubt whether it would be practicable, as the two branches would then be carried forward at the same time, have no congruity, and on this account they would not harmonize with each other. A flower show, if open to the public,—and to be so open is one of the best properties about it,—is attended by a motley audience, consisting of men, women, and children, of various ranks in society. These come to see sights, and not to hear instruction, how valuable soever that information may be. We find that an exhibition of a professedly scientific nature, however good it may be in itself, does not draw the attention of the public, or gratify them, unless there is a good deal of spectacle in it; and, therefore, where spectacle is the principal part, as it is at flower shows, we suspect that the ablest lecturers on Floriculture would address themselves to deaf ears.

Therefore, the only place at which the information that we desiderate can be communicated, is a quiet association, wholly composed of real cultivators, like the West London. The flower shows must thus be left to their proper function of diffusing a love of flowers and floriculture among the people generally, and it must be allowed that this is so praiseworthy, pleasant, and instructive an object, that it cannot be too generally diffused, or too numerously frequented on show days.

Valuable, however, as the flower shows, and the stimulus which they afford to the public, are, we think that the West London Florist's Association is an institution of a higher class, and calculated to produce more good in the knowledge and culture of flowers. It is a school of gardening of a very novel kind, in which the experienced instruct each other, and the unexperienced acquire knowledge, theoretical, and more especially practical, from all their superiors in the art. It is, in fact, a new character of school, in which both teachers and scholars receive instruction without any invidious distinction of the one class from the other. A subject is brought forward by some member at each meeting, and read by that member if he is present, or by the secretary if the member is absent: then the other members make their remarks upon it, approving or disapproving as they see cause, and thus the young members have the benefit of a number of their seniors in experience, upon every one of the varied subjects brought forward; and these not theoretical ones, but the results of real practice.

It is our intention, in future numbers, to report the floral proceedings of this Association as fully as our limits will allow; but this month, the principal meeting was a business one, and what was done is of interest only to the members themselves. The common meetings are of a different character; and from the nature of the subjects, and the number and talent of those who take part in the discussions, they are very valuable. We sincerely wish that there were such an association in every place, where there are gardeners enough to form even a very limited one; and it were well that similar associations should be formed by the members of other professions and trades.

August. MANCHESTER BOTANICAL AND HORTICULTURAL SOCIETY.—The last Exhibition was held on Wednesday, at the Society's gardens, Old Trafford.

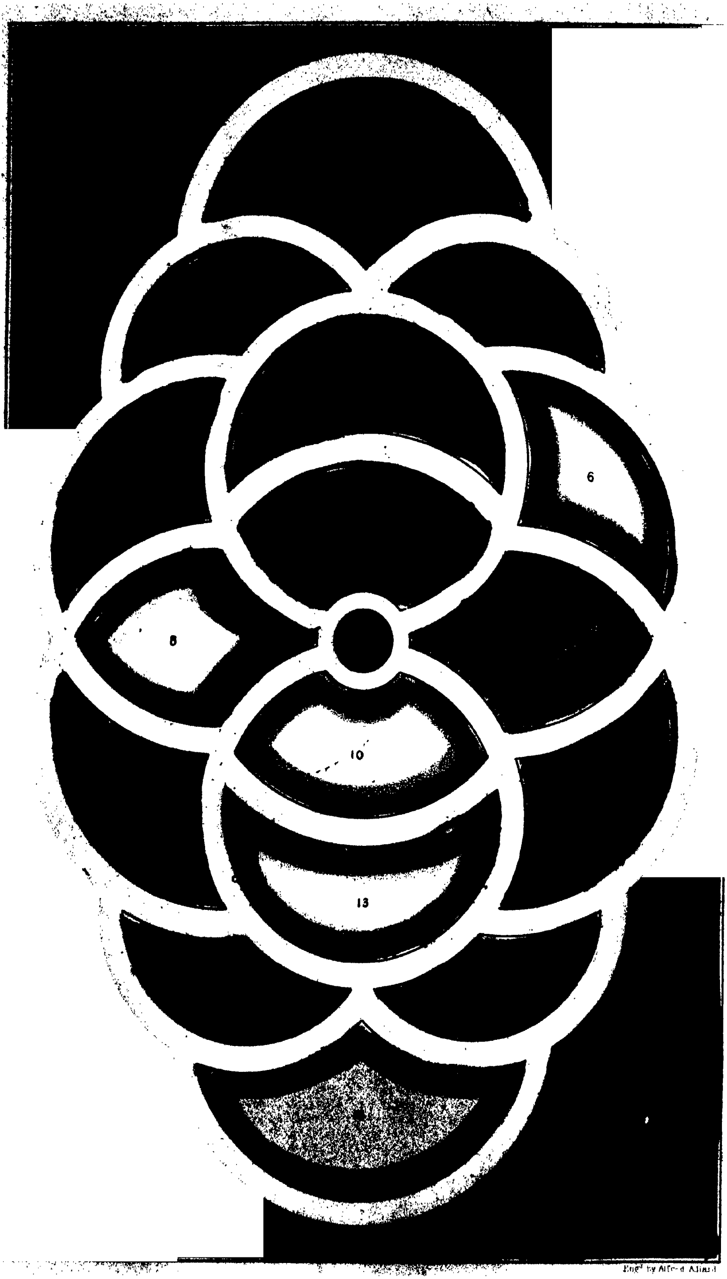
The first prizes awarded in each class:—

FIRST CLASS.

Dahlias, 24 distinct varieties...Thomas Appleby, gardener to Thomas Brocklehurst, Esq.
Ditto, 18 distinct varieties...William Deas, gardener to P. Lucas, Esq.
Ditto, 12 distinct varieties...James Taylor.
Ditto, 9 distinct varieties...John Gaskell.
Ditto, 6 distinct varieties...George Race.
Pansies, 12 varieties, in pans...William Chorlton, gardener to P. M. James, Esq.
Orchideous Plants...Peter Norbury, gardener to H. H. Birley, Esq. for Renanthrea coccinea.
Stove Plants...Thomas Appleby, gardener to Thomas Brocklehurst, Esq. for Costus Nepalensis.
Greenhouse Plants...William Deas, gardener to P. Lucas, Esq. for Sisanthus rustinarius.
Ericas...William Slow, gardener to John Knowles, jun. Esq. for Erica pulcherrima.
Dark Pelargoniums...William Chorlton, gardener to P. M. James, Esq. for Lowndes's Perfection.
Light Pelargoniums...James Walker, gardener to R. W. Barton, Esq. for Alexandria.
Fuchsias...William Deas, gardener to P. Lucas, Esq. for Fuchsia Chandelerii.
Calceolaria...James Walker, gardener to R. W. Barton, Esq. for Purpurea.
Herbaceous Plants...Ditto, for Statice latifolia.
Ornamental Plants...William Deas, gardener to P. Lucas, Esq.
Basket of Plants...Thomas Appleby, gardener to T. Brocklehurst, Esq.
Basket of Cut Flowers...James Walker, gardener to R. W. Barton, Esq.

SECOND CLASS.

Dahlias, 36 distinct varieties...William Lodge, nurseryman.
Ditto, 24 distinct varieties...Ditto, ditto.
Orchidea or Stove Plants...Thomas Appleby, gardener to T. Brocklehurst, Esq. for Oncidium lanceatum.
Greenhouse Plants...Ditto.
Basket of Plants...William Slow, gardener to John Knowles, jun. Esq.
Pines...Francis Macbeth, gardener to R. Mann, Esq.



Eng^{d} by Alfred Adlard

THE

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ON GROUPING FLOWER-BEDS, SO AS TO GIVE THE GREATEST POSSIBLE EFFECT TO THEIR COLOURS.

BY JOHN CAIE, AT HER GRACE THE DOWAGER DUCHESS OF BEDFORD'S, BEDFORD-LODGE, CAMPDEN HILL.

THE grouping together of plants of species, so as to form a mass of colour, in the flower-garden, is of recent origin, but not less valuable on that account; for, in fact, it has very much to recommend its more general adoption, not only in large flower-gardens, but also in small suburban residences. As the plants are now numerous for such a purpose, compared with what they were, little difficulty will arise in making a proper selection; and when made, as little trouble attend the keeping of them, because the greater portion requires not much more care than what can be attained by pits filled with leaves, or any fermenting material of equal heating properties. Previous to the winter setting in, it will be well to get the pit set in order. What we mean by this is, that the angle of the lights to the sun during summer will not be the angle for the wintering of such plants as we allude to during the cloudy days of winter; quite otherwise, for we would raise the lights on the back very much more during the diminished light, than when the sun's rays are powerful. Such raising of the lights does not only enable the wet to pass sooner off, but it increases the influence of light, and consequently dispels damp, that great barrier to the wintering of summer-flowering plants, because they are naturally found under a more powerful sun than we have. By September, the pits should be set in order; then get a number of pots, or boxes, fill them up to within three inches of the rim of the pot with turfy soil, over which put sand and peat earth, of equal proportions, sufficient to fill the pot; then press it down, and take shoots for cuttings, rather firmer in texture than otherwise, prepare them with a sharp knife, allowing two joints to be inserted in the soil, water them, and then set the pots in the pits, not at a great distance from the glass, and keep the pits close till the cuttings are rooted, when occasional airing will be necessary, and in frosty weather additional covering will be required; but by all means admit air and light whenever it can be done conveniently. When greenhouses are accessible, much of what we have said may be obviated, as after the plants are rooted they may be put on shelves, and may be either kept in the cutting-pots, or potted off singly until May, when they should be planted out into the flower-garden, and then pegged on the ground, if they are naturally of a creeping habit of growth; and even if they are not so, instances occur in which it may be done with propriety.

The figure which we have given in connexion with these remarks is merely to illustrate our views of grouping; and if any person will take a little trouble in studying it, the justness of the principle will soon become apparent, and consequently its advantages as compared with the promiscuous method of planting beds. When figures are seen in their length and breadth, it is a sure criterion that they ought to be a mass of one colour; for if not so planted, the first view is removed in looking after other objects in the figure, and consequently trouble is the result instead of pleasure.

REFERENCES TO THE FIGURES.

1. Eschscholtzia crocea.*
2. Verbena picta.
3. Verbena Tweediana.
4. Verbena Neillii.
5. Calceolaria rugosa.
6. Verbena teucrioides.
7. Frogmore scarlet Geranium.
8. Petunia erubescens.
9. Verbena Lambertiana.
10. Calceolaria angustifolia.
11. Verbena Tweediana grandiflora.
12. Verbena incisa.
13. Petunia nyctaginiflora.
14. Verbena Hendersoni.
15. Verbena pulchella.
16. Calceolaria integrifolia.

There are many more plants allied to these, but which will show what is meant.

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* Is a North American annual, and which, as well as many others from the same country, if sown in the autumn, will produce a gay appearance in the flower-garden, at a time when the summer flowering plants cannot be expected to be seen in perfection, namely, the spring months.

ON FORCING HYACINTHS.

BY MR. R. PLANT.

In a late number of the "Florist's Journal," I read with much interest an excellent and entertaining article on Forcing Hyacinths, from that very useful Society, the West London Gardeners' Association. Mr. Shearer's essay contains very excellent practical instructions for early forcing; indeed, those bulbs intended to be placed in heat before Christmas, cannot be subjected to more proper treatment. But what I would suggest to Mr. Shearer, the members of the Association, and to the readers of this journal, is the necessity of something more than is mentioned in the article alluded to, in order to obtain a good bloom about the latter end of the forcing season, a period when the best flowers are most wanted, especially by those who are exhibitors at the early Flower Shows, at most of which there are prizes offered for Hyacinths, and generally but few competitors. It will be found, in nine cases out of ten, that the bulbs intended for late forcing, and which consequently remain out of doors, say to the end of January or February, will have filled their pots with roots, and also protruded them for some length through the bottom, and when they meet with obstruction, will frequently lift the bulb an inch above the rim of the pot, when usually, from want of support, it falls on one side, a very unsightly object; but to say nothing of appearances, it is very evident such roots can be of but little immediate benefit to the bulbs, as from their position they are incapable of deriving any advantage from the soil in the pots; and when removed to the forcing-house, a very little extra bottom heat will, to use a technical term, burn them, and also in the removal the roots are very liable to injury from being broken, &c. These objections occurred to me some seasons back; and to remedy them, I *repotted* all the bulbs intended for late forcing: the result fully bore out all my anticipations. This I am aware is not included in the general practice, but for this reason, I wish the more readily to make it known. The method I adopt is, in the first potting, to use large forty-eight pots, in order to allow of using thirty-twos for the shift; and as soon as I find, on examination, the roots have reached the bottom of the first pots used, I very carefully turn them out, preserving the earth about the roots entire, and pot them in thirty-twos, using the same compost as at first, nearly the same as recommended by Mr. Shearer, with the addition of a little good loam; this should be done at least a fortnight before they are placed in heat, by which time they will have recovered from the effects of the shifting, which, however, will be but very slight if carefully done, and the stimulus given by the fresh earth will soon be made apparent in the size of the flower stem.

As the raising of florists' flowers from seed is an operation full of interest, especially to amateur growers, it may not be out of place to say a few words on the subject. In saving Hyacinth seed, that from the best formed flowers should be selected, preferring the semi-doubles. It should be perfectly ripe before gathered, which may be known by the pericarpium splitting, or assuming a yellowish cast; then cut it off with the stem attached, and keep it in a dry cool place till the time of sowing, which may be either the latter end of October, or beginning of March; it may be sown either in deep boxes or on a warm border, though boxes are preferable, as being more easily protected in severe weather; the soil should be of an open texture; common garden mould, with about a third part sand added, will suit them. The seed should be sown moderately thick, and covered with about half an inch of the same earth. They require no further attention, except to clear them of weeds, and to protect them from frost, though this must be well attended to the second winter, as the little bulbs are many of them then very near the surface; but farther than this they require nothing, till the spring of the third year, when a top dressing of rotted cow-dung should be given them, and in the following July they should be taken up and treated the same as large bulbs; in the course of the two following seasons all the strongest roots will flower, when the best may be marked or named. Those selected from the seedlings should contain more or less of the following properties, which may be taken as the generally received criterion of a good Hyacinth. The stem should be not less than eight inches in height, strong and erect. The foot-stalk of each flower to be short and strong, standing out in a horizontal position, so that the flowers, which must be large, may, when expanded, form a compact pyramid; the crown, or centre flower, must be perfectly upright; they should assume a convex form, the petals to be thick, fleshy, and broad, and double flowers should fill well

up in the eye, the colours should be bright and distinct, and if the colour of the eye is of an opposite shade to the colour of the petals, as is the case with that beautiful variety Anna Maria, it gives additional value to this, at any time, beautiful flower.

R. P.

The Howe, Halsted.

ACACIA ARMATA.

BY MR. W. SHERWOOD,

GARDENER TO MRS. FRASER, CAMPDEN HILL, KENSINGTON.

Having read in the Florist's Journal, No. 21, a paper on the Acacia Armata, in which is detailed a great deal of useful information regarding the habit of that plant, its natural position on the earth, and the soil and climate peculiar to that locality, the correctness of every statement made by the writer I think no one will question ; but of the justness of the inference, " that it is for the want of imitating their climate, and partly also the native soil of these plants, that they do not do well with us," I entertain a doubt, in consequence of having under my care, at the present time, some well-grown healthy specimens, qualities which I attribute to treatment just the opposite of that which they are subjected to by nature, particularly in reference to soil.

I think the culture of this plant is so simple, that I can in a few words state all that is necessary to be said on the subject. We will begin with propagation. They may be raised from cuttings or seed. If by seed, it may be sown as soon as it is ripe in the summer, in pots filled with sandy peat, and kept in a cold frame till the plants are up, when they should be removed to a cool situation. If cuttings are preferred, they will strike root in white sand, with a little bottom heat, under bell glasses, in the spring. In either case they will be fit for potting in small sixties in September, and then removed to the greenhouse or a dry pit. When they are beginning to grow freely, the following spring, they should be shifted into 48-sized pots, and the point of the leading shoot of each plant pinched off. The proper place for them this year (and every succeeding one), from June till October, is one out of doors, sheltered from cutting winds and partially shaded, but not under trees, taking great care to prevent worms getting into the pots.

The second spring, before they commence growing, every shoot should be tied to a straight stick, and all of them staked except the centre one. If this is attended to, and the plants frequently turned round, and not crowded when growing, neither pruning or staking will be required ever after. This brings me to the last part of the subject, namely, the application of water and the choice of soil.

And here we shall be most likely to err if we are guided by the laws of nature in applying the elements essential to the existence of a plant when we have completely changed its constitution by artificial treatment. It is quite true that these plants, by their peculiar organization, are enabled to endure the long-continued drought to which they are exposed in their native climate, but we must remember that their roots enjoy an unlimited range, and probably descend to where *some* moisture is to be found. And it is a fact demonstrated by experience, that although plants are endowed with the hardihood to bear extreme changes of the elements, yet their health is not impaired if these changes are diminished. Therefore I would advise water to be given whenever the soil indicates dryness, and then only. I am convinced it will do no harm if the pots are well drained.

Another prevalent error is, that of supposing the natural soil of a plant is best suited for its growth in a pot. As well might we say that the soil in a flower garden is the best for putting the numerous varieties of exotic plants which luxuriate in it during the summer months, and indeed seem to indicate by their growth that the quality of soil was to them a matter of subordinate importance; but one trial will suffice to prove the fallacy. It is very evident that all plants that root in the earth require certain properties which it contains; these they collect; but when restricted to the narrow limits of a pot, the soil we provide ought not only to abound with these nutritious properties, but have nothing in it inimical to that particular plant. The soil which I have found to come the nearest to this standard of excellence respecting the Acacia, is the Wimbledon peat. This I use in all stages of their growth, shifting them into larger pots every spring, if they require it. This peat or bog is a mass of decaying vegetables, that have been naturally produced on the surface of a diluvium deposit, which is a mixture of sandy, flinty gravel, containing a large quantity of iron, and resting on the bed of the London clay. It is reasonable to suppose that the first vegetable production of this soil was lichens, which absorb a large portion of carbon from the air, and require little from the soil. These were succeeded by mosses, which by their decomposition and mixture with the sand formed a thin strata of mould, fit for the production of other plants, amongst which were ferns. The roots of these would penetrate to a great depth in the gravelly soil, and collect what alkali it was capable of yielding: and so, by the decay of a crop of leaves annually on the surface, a quantity of potash would become incorporated with the new-formed earth sufficient for the growth of heath, and ultimately leguminous plants, such as furze and Acacia. The peat, therefore, which we use for potting is a soft, light, spongy substance, holding water by capillary attraction; is composed of woody fibre, white sand, a little potash, the oxide of iron imparted to it by the subsoil, and dispersed through the whole mass; as is also the tannin principle of the mass which it contains in a considerable degree, and has given to it that antiseptic property without which it could never have been composed; because if plants are not imbued with this principle, their whole substance, when life is extinct, would pass into air, and resume their original elements.

But the power of this tannin is not only destroyed by lime and other earths, but also rapidly by the roots of the plant I am writing of.

If we can place any reliance in Liebeg's theory, we may reasonably infer that the principle called *humic acid* exists in peat, "*humus* being a carbonaceous substance, and containing hydrogen, undergoes, when moistened, a process of slow combustion. This goes on in the woody fibre from the commencement of its decay till it passes into *coal of humus*. During the intermediate stages it constitutes the former description of humus, which, when acted upon by an alkali, is converted into humic acid, and combines with it."

So that, if humic acid is the agent by which the soluble parts of soil are converted into the proper food of plants, we see that the process is facilitated or retarded by the presence of a large or small quantity of alkalies. I may here mention one circumstance which induces me to think that humic acid does exist in peat, and that is, that the iron which gives sand the red colour is all abstracted when in this earth.

W. S.

ON THE CULTIVATION OF SACCOLABIUM.

This is one of the most beautiful and interesting, and at the same time the most singular, of orchideous genera. They are all inhabitants of the moist and warmest parts of India, where they decorate the woods with their splendid flowers, and perfume the country for miles round with their sweet odour. They are what are termed air plants. Their scent is to be compared to a bed of violets when in its highest state of perfection. The best mode of growing this singular and beautiful genus is to have billets of oak wood with the bark on. The billets should be proportioned to the size that the plants grow to. Before placing them on the billets, a little sphagnum should be placed on the part where the plant is to be put. The plant then should be placed on the moss, and fastened on by a piece of lead wire; and two small nails should be used for the purpose of fastening the lead wire; and when the plant is made fast, more sphagnum should be placed around the base of the plant and over the billet, so that it may be nearly two inches thick, that as much moisture may be retained about the plants as possible, as they are natives of the dampest woods of the tropics; for in their season of growth the places where they grow cannot be compared to any thing but a strong vapour bath. The moss must all be fastened on by lead wire. The wire must be made fast with small nails on the under side of the billet. The billet then must have a nail at each end, for the purpose of making the wire fast, by which they must be suspended. The wire for this purpose must be copper. Their season of growth with us is generally from the beginning of March till the latter end of October. Moisture then should, in a great measure, be withheld; for, after that time, if they have much water or moisture, there is little chance of their perfecting their flower buds. All their season of growth the plants should have plenty of moisture, and the heat should range from 65° to 100°. All this season they should be frequently syringed, so as to keep them moist; but, after the latter end of October, they should be kept nearly dry, and the house should range from 45° to 70°. The plants should be placed in the centre of the billets, so that they may hang in a horizontal position; that is, that the heads of the plants may droop downwards, but not too much; so that as little water may remain in the heart of the plant as possible. The number of species belonging to this genus is not many. I shall enumerate them as far as I know.

Saccolabium Blumei. Another splendid species, equally as fine, if not finer, than the other two, which one who had not seen the plants could scarcely believe it possible to be finer. The leaves are shorter and stouter than either of the other species.

The flowers are spotted with crimson on a white ground. Flowers equally as fine, and in the same manner, as the other two. A native of Java; introduced in 1839. Flowers from March to June.

Saccolabium giganteum, (largest.) This is by far the finest of all the species. The flowers are said to be nearly twice as large as that of *guttatum*, and of a richer colour. A native of Java; not yet introduced, that I am aware of.

Saccolabium Cumingii, (Cuming's.) This is a very pretty species. Sepals green spotted with brown; petals dull white spotted with purple; the lip spotted with blueish purple. The flowers are large and thinly scattered on the spike, which is stiff and somewhat erect. This is not so large a growing species as the last; the leaves are narrower and shorter, and more pointed, but bifid at the apex. A native of the Philippines; introduced 1840.

Saccolabium papillosum. An upright growing species. The spikes of flowers are numerous. When the plant is strong the spikes are short and few flowered. The sepals are green; petals yellowish with brownish spots. The lip is crimped, white with purple spots. A native of India; introduced in 1830.

Saccolabium compressum, (compressed.) This is a very rare species; the flowers are produced in bunches; they are individually very pretty, and more so when altogether. Not having seen the flowers of this species, I cannot say what the colour is. A native of the Philippines; introduced 1838.

Saccolabium densiflorum, (dense-flowering.) Sepals brown; petals and lip yellow spotted with purple. This is a very pretty species. They are produced in dense spikes, which are short and somewhat pendant A native of Manilla; introduced 1837.

Saccolabium micranthum, (small-flowered.) A pretty little species. The leaves are short and bifid at the apex. One of the lobes is somewhat shorter than the other. They are of a pale green colour. The flowers are produced in small spikes of about eight to ten flowers, violet-coloured, on each spike. A native of India; introduced 1837.

Saccolabium denticulatum, (tooth-flowered.) The leaves are pale green and pointed at the apex, and narrower than in that of *micranthum*. The flowers are produced in small spikes, and very pretty. A native of India; introduced 1838.

Saccolabium bifidum, (two-cleft.) The sepals are of a straw colour, while the petals are white, with the lip beautifully spotted. This is a very neat species. Its flowers are small. A native of Manilla; introduced in 1837.

Saccolabium calceolare. The leaves are linear-channelled and somewhat pointed. The flowers are produced in small spikes of about four to six flowers on each. They are very large and handsome for the size of the plant. The flowers are yellowish, beautifully spotted with crimson. A native of India; introduced 1837.

Saccolabium carinatum, (keeled.) This is also a very neat species. The flowers are not very large, but of a very pretty colour. A native of India; introduced 1838.

Saccolabium pallens, (pale.) Another of the small flowered species, but very pretty. The flowers of this I have never seen; but I believe they are of a pale yellow. A native of India; introduced 1837.

Saccolabium gemmatum. A species with small leaves, which are linear and furrowed above, of a dark green. The flowers, which are produced on small spikes, are of a rich purple, not large, but very handsome. A native of the East Indies; introduced 1837. Flowers from May to June.

Saccolabium rubrum. Another splendid species. The flowers are of a rosy pink, and exceedingly delicate. The spike of flowers is from six to eight inches long. The flowers are large; the leaves are distichous and recurved, of a pale green, and toothed at the apex. This is a very free-flowering species. A native of the East Indies; introduced in 1838. Flowers from April to June.

There are about twelve more species besides those here enumerated in the country, but which have not yet flowered. There are others known to botanists, but not yet introduced into this country; but we hope they soon will. All the attention that the cultivator of this singular and lovely tribe can give them will not be thrown away. He will have the pleasure of reaping the fruits of his labour, by having a splendid show of flowers of the most lovely of nature's children. Even the flowers of the minutest species of this genus are beautiful; and every one of the species ought to be cultivated wherever there is a stove; for there is not any tribe of plants that can vie with orchideæ in beauty and singular forms of their flowers, and also the singular mode by which they are cultivated. Persons who have not got an orchideous house may grow many of these singular and beautiful plants in the common plant stoves, where the heat ranges from 50° to 90°, and suspended from the rafters of the house. There I have no doubt many of them would do well. I hope, for the information of those who never have had the pleasure of seeing this splendid tribe of plants, that a figure or two will be given in an early number of the FLORIST for next year. No one can have any idea of the splendour of orchideæ unless they have had the pleasure of seeing the plants in flower or in figure. As soon as I know of any new species of this splendid genus flowering, I shall send an account of it to the FLORIST; as well as an account of those species which have flowered belonging to those genera which have been mentioned in the FLORIST, and have flowered since.

P. N. DON.

Tooting.

THE WEATHER FOR NOVEMBER.

THOUGH there is usually but little except hardy shrubs and herbaceous plants left exposed during this month, yet November may be regarded as the month which is ultimately to give a character, not only to the rest of the winter, but to the spring, and, to a certain extent, to the whole ensuing year. Therefore the study of the weather for November has claims upon the floriculturist of a far more general and important nature than there is in the immediate aspect of the grounds, especially the beds and borders, during the month itself. We do not say that November is the cause of this importance, for the phenomena of every month or period of time are effects, not causes. But still, there are certain months during which the causes may be estimated from their effects, and among these, November holds a high and conspicuous place, in the influence of seasonal causes, and the effect of this causation, on the east side of Britain. This arises from the locality of the British Islands, which are so proximate to the Continent on their eastern sides that, in general estimate of climate, the intermediate sea may be overlooked, and Britain may be regarded as situated between the continent of Europe and the Atlantic.

The climatal variations which are produced by these causes may be regarded as divided along the mesial line, or spinal heights of Britain; for, though there are violent storms, which sweep over the whole till they have exhausted their fury, the general influence of a foreign character, which affects the climate of Britain, is produced by continental Europe on the eastern side, and by the Atlantic on the western. Ireland, as part of the general group, comes almost wholly within the range of Atlantic influence; for only a small portion of the north-east of it is affected by continental winds, proceeding by the valley of the Forth and Clyde canal; and to all the remainder the mountains of the south of Scotland, of England, and of Wales, present a barrier generally insuperable to the east winds from the continent.

The west wind, or wind at south-west, is the natural direction of the atmospheric current in Britain, where that current is the return occasioned by the trade winds further to the south. As such, it is generally loaded with moisture up to the point of saturation, or nearly so; and the result is a greater humidity of the Irish climate than of the English, and a more rainy atmosphere all along the western side of Britain than along the eastern.

When the surfaces of the north and north-eastern regions of Europe are heated by the drought, which is, generally speaking, longer and more protracted than in Britain, there is an acceleration given to the eastern atmosphere which extends over Britain and the intervening sea to the continent; and in this state of things, the atmosphere, except where affected by local causes, such as downs and plains, mountains and valleys, is comparatively tranquil; and, to what distance soever it may extend, this south-westerly wind is always favourable to wholesome vegetation. Upon the low and heated shores of the west the quantity of rain is not so great as it is inland towards the heights, because the cold air which the current has to encounter on these heights reduces the temperature of the whole, and consequently its capacity for moisture; and, independently of all local causes, there may be rain on the central, or spinal, mountains and hills, when there is dry weather both to the eastward and to the westward of them. But it is the upland slopes, toward the west, upon which rain falls the most abundantly; and it diminishes the temperature, and produces showery weather, which, though admirably adapted to the growth of potatoes and fruits, does not answer so well for wheat as climates which are less showery.

When the current of the atmosphere is from any point between the north and east, the state of things is reversed and unnatural. Where this is the case, the cold winds from the continent may counteract the natural current from the south-west as far as the western shores of Britain. These east winds, when they quit our eastern shores, are not saturated with humidity; and therefore they produce blighting winds in the spring, and deluges of autumnal rain on some parts of the country, although the west wind, which still continues at a certain height above the sea, is the source out of which the deluges of rain, with an easterly wind on the surface, are produced.

There are two principal seasons of those effects of east wind,—the blighting winds of spring, and blighting winds again during the autumn, the latter being those which are accompanied by the most heavy deluges and floods. The spring blights are occasioned by a premature heating of the surface of the country; and they continue drying winds until the central heights are arrived at. The severe wind of autumn is produced by an unduly protracted autumn, which blows across the country, and mingles with, and overcomes, the west wind, which is opposed to it; and the quantity of moisture above what serves to saturate the compound is, as in all similar cases, deposited on the earth in water or in snow, according to the locality. If the character of the soil be such as to render it easily cooled by evaporation, this produces the same effect as is produced in other places by greater altitude; and hence there is often snow pon the downs of Kent as early as on the lower or middle slopes of the Grampians.

The setting in of early dry and warm weather in Britain, before the cold has given way upon the continent, is the great cause of the blighting east winds of spring, which are the most destructive of any by which Britain is visited. They destroy the buds of the early fruit-trees, hurt the prematurely expanded buds of flowering shrubs, prevent the early sown or transplanted annuals from coming properly to maturity, and, generally speaking, injure the whole vegetation, whether native or cultivated, within the range of their action. In like manner, the autumnal floods are occasioned by protracted warmth in Britain after the cold has set in on the continent; and these are the grand causes from which those engaged in cultivation must form their prognostic of the succession of seasons, that is, of the weather, whether the space cultivated by the prognosticator be a farm, or ornamental park, or a single flower-bed. The cause both of the early and late growth in Britain is drought in the soil, which occasions a more than usual absorption of heat, which penetrates beyond the average depth. A dry, and therefore a warm spring, summer, and early autumn, are the circumstances which produce this excess of temperature; and when the rain or the snow sets in, a considerable portion of this heat is retained in the soil below these, or either of them; and is in its turn the means of producing another warm and early season; the corrective of this is occasional showery weather throughout the summer, though in not so great quantity as to soak the roots of plants, or prevent a wholesome blooming and fruiting; for the water, being a bad conductor of heat, as compared with dry soil, the heat absorbed is inferior in quantity, and does not penetrate so deeply. 1841 has been a year of this description; the natural inference is, it will not be too early, and that, consequently, much of the damage to plants will be avoided; at least, such is the consequence as grounded on the experience of former years. November has been throughout a month increasing in cold, with alternations of rain and frost; but, though a good deal of the former has fallen, it has probably not reached the average over the whole country. It appears also to have had little connexion with the continent, or with any thing else extrinsic of the country itself. This is inferable from the local extent of the different storms; for, though in some of the more violent ones the course has extended to some distance from the district in which it was produced, this appears to have been owing more to the momentum of the air in rapid motion than to any general cause affecting the whole country. In illustration of this we might mention many storms which occurred, but we confine ourselves to a very violent thunder-storm which occurred near Petworth, in Sussex, and which was obviously produced by a collision between the air of the Downs and that of the Weald, when these had very strongly opposed electric tendencies.

Such are the facts; the conclusion, in the first instance, is, that the heat of the soil of Britain is not too high; and from that again may be inferred, as a secondary evidence, that the ensuing spring will not be early, but that it will be safe. Subject, however, as we are to the opposing influence of two atmospheres besides our own one, circumstances may occur overturning even our most rational conclusions.

FLORICULTURAL INTELLIGENCE.

August. SOUTH LONDON FLORICULTURAL SOCIETY. The Dahlia Show, at the Surrey Zoological Gardens, was visited by the largest assemblage of company that we ever witnessed at this or any other floral exhibition; during the afternoon there could not have been less than 30,000 persons in the garden.

The stands of Dahlias contained a number of handsome blooms, although a portion appeared to have suffered from the weather. There were some good seedlings, most of which, however, we have already seen and noticed in former papers; among them were a pretty white, from Mr. Neville, of Peckham, called Princess Royal; a dark and rather small flower, from Mr. Wharton; a beautiful white, from Mr. Wildman; an orange, from Mr. Pain, of Mitcham; a good purple, from Mr. Wildman; a good orange, from Mr. Brown, of Slough, called Marquis of Lansdowne; a beautiful lilac, from Mr. Jeffries, of Ipswich, called Lady Harland; and a lilac, from Mr. Sadler, of Walworth.

The collections of Plants were remarkably good, considering the time of year; that of Mr. Coutts contained some handsome specimens of Gloxinia, Vinca, &c. Mr. Denyers had a great variety of Heaths, Fuchsias, &c. Mr. Groom exhibited a collection of Lilium lancifolium album, which was much admired. Messrs. Paul, of Cheshunt, sent a splendid collection of Roses. Collections of Cut Flowers were shown by Messrs. Denyer, Bruce, Davies, and Bursell; Asters by Messrs. Paul, Edmonds, Halley, and Foster. Mr. Tansley, of Croydon, exhibited a handsome specimen of Fuchsia corymbiflora; aud Mr. Cuthill, of Camberwell, a well grown plant of Lisianthus Russellianus.

AMATEURS, MEMBERS ONLY.

Best 24 Dahlias...dissimilar blooms, gold medal, Mr. Knight; large silver medal, Mr. Humber; middle silver medal, Mr. Proctor; small silver medal, Mr. Lidgard.

Best 12 ditto, ditto...large silver medal, Mr. Cook; middle silver medal, Mr. Trevers; ditto, Mr. Wildman; small silver medal, Mr. Bell; second small silver medal, Mr. Clark.

Best 12 Asters...small silver medal, Mr. Bridges.

Best Collection of Miscellaneous Plants...middle silver medal, Mr. Allnutt.

Best Heartsease...large silver medal, Mr. Bridges.

Best Collection of Cut Flowers...middle silver medal, Mr. Davis; small silver medal, Mr. Bushell.

GENTLEMEN'S GARDENERS.

Best Collection of Miscellaneous Plants...gold medal, Mr. Attlee; large silver medal, Mr. Bruce; middle silver medal, Mr. Coutts; small silver medal, Mr. Pattison.

Best 24 Dahlias...dissimilar blooms, large silver medal, Mr. Mortiboy; middle silver medal, Mr. Cowan; ditto, Mr. Burchett; small silver medal, Mr. Gunner; second small silver medal, Mr. C. Baker.

Best 24 Asters...small silver medal, Mr. Foster.

Best Heartsease...middle silver medal, Mr. Hancock; small silver medal, Mr. Foster.

Best Collection of Cut Flowers...large silver medal, Mr. Bruce; middle silver medal, Mr. Inwood; small silver medal, Mr. Mosely.

NURSERYMEN, MARKET GARDENERS, AND FLORISTS.

Best 50 Dahlias...dissimilar blooms, gold medal, Mr. Willmer; large silver medal, Mr. Tyler; middle silver medal, Mr. Brown; ditto, Mr. Gaines; small silver medal, Mr. Jackson.

Best 24 ditto, ditto...large silver medal, Mr. T. Back; middle silver medal, Mr. King; small silver medal, Mr. Alexander.

Best 36 Asters...small silver medal, Mr Henbrey.

Best Collection of Miscellaneous Plants...large silver medal, Mr. Jackson; middle silver medal, Mr. Fairburn; small silver medal, Mr. Denyer.

Best Collection of Roses...large silver medal, Mr. Paul.

Best Heartsease...large silver medal, Mr. Buxton; middle silver medal, Mr. Henbrey.

Best Collection of Cut Flowers...middle silver medal, Mr. Fairbairn; small silver medal, Mr. Denyer.

OPEN TO ALL CLASSES.

Best Specimen Plant...large silver medal, Mr. H. Tansley; middle silver medal, Mr. Wilson; small silver medal, Mr. Dowson.

Best Collection of Orchideous Plants in flower...large silver medal, Mr. Sparrey.

Best Seedling Dahlia of 1840...middle silver medal, Mr. Sparrey; small silver medal, Mr. Jeffries.

Ditto of 1841...middle silver medal, Mr. Wharton; small silver medal, Mr. Wildman.

Extra Prize.—(Given by R. Seldon, Esq. to Amateurs not keeping a regular Gardener, Members of the Society.)

Best 12 Dahlias...dissimilar blooms, middle silver medal, Mr. Humber.

September 9. Devon and Cornwall Horticultural Society. The nineteenth exhibition of this Society took place at the Royal Hotel, Plymouth. The flowers included some rare plants, which attracted great attention, particularly some among the collection exhibited by Messrs. Luccombe, Pince, and Co. of Exeter. Judges, Messrs. Barrett, Tatam, Roberts, Dyer, Luke, and Saunders. List of prizes:—

FLOWERS AND PLANTS.

Stove Plants...the best group of 6, 1*l.* Mr. Griffin, Cowley.

Greenhouse Plants...the best group of 8, 15*s.* Mr. Griffin; second best ditto, 10*s.* P. E. Lyne, Esq. Lipson.

Dahlias...best collection of 24 blooms, dissimilar flowers, Class 1, Gold Medal, J. E. Kingdon, Esq. Exeter; second best ditto, Silver Medal, R. Sleeman, Esq. Tavistock; third best ditto, 10*s.* Mr. Dyer, gardener to H. Willyams, Esq. Carnanton.

Ditto...best collection of 12, Class 2, Silver Medal, J. E. Kingdon; second best ditto, 15*s.* T. Tripe, Esq. Plymouth; third best ditto, 10*s.* R. Sleeman, Esq.; fourth best ditto, 5*s.* Mr. Dyer.

German Asters...the best collection of 24, 7*s.* 6*d.* Mr. J. Paul, Saltash; second best ditto, 5*s.* J. Burrell, Esq. St. Stephen's.

Cockscombs...the best 6, 5*s.* Mr. J. Taylor, Trematon Castle; second best ditto, 3*s.* 6*d.* Miss Revell, Tamerton.

Hardy Annuals...the best collection of 24 sorts, 10*s.* W. C. Hodge, Esq, Pounds; second best ditto, 7*s.* 6*d.* Mr. Griffin.

Indigenous Plants...the best group of not less than 50 sorts, 10*s.* Mr. Griffin.

Ten-Week Stocks...best collection of, 5*s.* Mr. Griffin; second best ditto, 3*s.* 6*d.* Mr. J. Cook, Stoke.

Marigolds...the best collection of, 3*s.* 6*d.* J. E. Kingdon, Esq.; second best ditto, 2*s.* 6*d.* Mr. J. Taylor.

Zinnia...best collection of sorts, 7*s.* 6*d.* Mr. Taylor.

Verbenas...the 12 best, in pots, 7*s.* 6*d.* W. C. Hodge, Esq.

The best specimen rare Plant...not having before obtained a prize, 10*s.* Cattleya, new species, not named, Mr. Griffin.

Best Design of Cut Flowers, Silver Medal, Mr. Griffin.

For the best collection of Dried Specimens of Grasses indigenous to Devon and Cornwall, with their names and localities, the collection obtaining the prize to be the property of the Society, Gold Medal, Rev. W. S. Hore, Stoke.

24 Dahlias...5*s.* Mr. J. Bate, Stonehouse.

12 Ditto...2*s.* 6*d.* W. C. Hodge, Esq.

Seedling Dahlia...2*s.* 6*d.* Mr. J. Cook.

Cockscombs...2*s.* 6*d.* Mr. J. Cook.

Group of Orchideous Plants...Gold Medal, Mr. Griffin.

Group of Ericas...Silver Medal, Mr. Griffin.

Dried Grasses...10*s.* 6*d.* Mr. Griffin.

Group of Indigenous Plants...7*s.* 6*d.* Mr. J. Ellis, Widey.

September 9. Hampshire Horticultural Society. The summer Exhibition of the Hampshire Horticultural Society took place at the Victoria Assembly Rooms, Southampton.

The Show was magnificent, as it always is, though not superior to that of last year. On entering the room, the first objects that met the eye were six splendid Cockscombs, from the garden of the High Sheriff of the county, F. Holloway, Esq. The silver medal was awarded for these superb flowers. The silver cup was obtained by H. C. Compton, Esq. M.P. for the best 30 Dahlias.

The value of the Medals was as usual—Silver gilt, 15*s.*; dead silver, 12*s.* 6*d.*; bright silver, 10*s.* 6*d.*; German silver, 7*s.* 6*d.*; gilt-rimmed bronze, 5*s.* 6*d.*; bronze, 3*s.* 6*d.* Prizes were as follows:—

PLANTS AND FLOWERS.

Best Orchideous Stove Plant...d. s. m. to Rev. F. Beadon, for Stanhopea grandiflora.
Best Stove Plant, not Orchideous...d. s. m. to J. Pulteney, Esq. for Gloriosa superba.
Best Collection of Stove Plants...d. s. m. to Rev. F. Beadon.
Best Greenhouse Plant...d. s. m. to Rev. F. C. Rashleigh, for Lisianthus Russellianus.
Best Collection of ditto...1. D. s. m. to Rev. F. Beadon; 2. G. r. b. m. to J. Pulteney, Esq.
Dahlias...30 best, Silver Cup, to H. C. Compton, Esq.
Ditto...24 best, b. s. m. to Mr. Ross.
Ditto...20 best, g. s. m. to Mr. Kirkland.
Ditto...12 best, g. r. b. m. to Rev. F. Beadon.
Best 12 Perennial Herbaceous Plants...named, g. r. b. m. to the Rev. the Warden.
Best 12 Hardy Annuals...named, g. r. b. m. to the Rev. the Warden.
Heartsease...12 best, named, W. J. Campion, Esq.
Best Collection of ditto...b. m. to W. J. Campion, Esq.
Best 10 China and Hybrid Roses...named, Rev. F. Beadon.
Best 3 Climbers...cut or in pots, Rev. G. C. Rashleigh.
Best Collection of Salpiglossis...ditto, Rev. Dr. Moberly.
Best Collection of Zinnias...b. m. to Lady Hewitt.
Best French Marigolds...b. m. to J. Guitton, Esq.
Best Collection of China Pinks...b. m. to G. R. G. Ricketts, Esq.
Best 6 Coxcombs...H. Holloway, Esq.
Best 4 Shrubby Calceolarias...W. J. Campion, Esq.
Best 4 mixed ditto...W. J. Campion, Esq.
Best Collection of Stocks...G. R. G. Ricketts, Esq.
Best Collection of Cut Flowers...g. r. b. m. to Rev. F. Beadon.
Best Seedling Dahlia...g. s. m. to Mr. Ross.
Best Collection of Phlox...g. s. m. to the Rev. the Warden.
Best Collection of Plants...(all kinds admissible), b. s. m. to J. Fleming, Esq.

September 10. GRANCHESTER DAHLIA SHOW. The successful competitors were—

Best 12 Blooms...1*l.* Mr. Taylor; second ditto, 15*s.* Mr. R. Boning; third ditto, 10*s.* Mr. Newman.
Best 6...15*s.* Mr. J. Boning; second ditto, 10*s.* Mr. Sparrow; third ditto, 5*s.* Mr. R. Wright.
Best 3...10*s.* Mr. E. Wright; second ditto, 7*s.* 6*d.* Mr. Edis.
Best 1...10*s.* Mr. J. Boning; second ditto, 5*s.* Mr. Taylor.
Best Seedling...3*s.* Mr. Nutter; second ditto, 2*s.* Mr. Taylor.
Best Device...10*s.* Mr. Edis; second ditto, 5*s.* Mr. Nutter.

September 22 & 23. LEICESTERSHIRE FLORAL AND HORTICULTURAL SOCIETY. The fourth and last Exhibition of the season was held at the Exchange Room. The Dahlias were exceedingly good, and decidedly the best that have been exhibited at any of their previous shows. They embraced most of the esteemed varieties. The awards of the judges were as under:—

DAHLIAS.—OPEN CLASS.

First Pan of Fifteen...Mr. E. Morley, Sapcote, with Phenomenon, Rival Sussex, Lewisham Rival, Springfield Rival, Beauty of the Plain, Suffolk Rival, Lancashire Witch, Lady Middleton, Unique, Bishop of Winchester, President of the West, Maria, Conservative, Suffolk Hero, and Climax.

Second ditto...C. B. Robinson, Esq. (Harden, gardener,) with Amato, Lancashire Witch, Essex Rival, Beauty of West Riding, Mary, Contender, Bishop of Winchester, Lady Middleton, Hope, Grace Darling, Climax, Conservative, Nicholas Nickleby, Unique, and Maria.

Third ditto...Ditto, Conservative, Nicholas Nickleby, Contender, President of the West, Conqueror, Duchess of Richmond, Climax, Rienzi, Amato, Lady Middleton, Hope, Essex Rival, Grace Darling, Rosa, Bishop of Winchester.

AMATEURS' CLASS.

First Pan of Six...Mr. E. Morley, Sapcote, with Unique, Rival Sussex, Phenomenon, Marquis of Lothian, Le Grand Baudine, and Bishop of Winchester.

Second ditto...Mr. J. Smalley, with Springfield Rival, Nicholas Nickleby, Contender, Beauty of the Plain, Rival Sussex, and Bishop of Winchester.

Third Pan of Six...Mr. J. Smalley, Conservative, Nicholas Nickleby, Contender, Springfield Rival, Rienzi, and Bowling-green Rival.

Dark...1. Rival Sussex, Mr. E. Morley. 2. Suffolk Hero, Ditto. 3. Contender, C. B. Robinson, Esq. 4. Bishop of Winchester, Ditto. 5. Perfection, Mr. William Musson. 6. Rienzi, C. B. Robinson, Esq. 7. Essex Rival, Ditto. 8. Bowling-green Rival, Ditto.

Purple or Shaded...1. Le Grand Baudine, Mr. E. Morley. 2. Conservative, C. B. Robinson, Esq. 3. Conservative, Ditto. 4. Conductor, Mr. E. Morley. 5. Climax, C. B. Robinson, Esq. 6. Horwood's Defiance, Ditto. 7. Pickwick, Mr. G. Walker. 8. Amato, Mr. J. Smalley.

White, or Blush White...1. Lewisham Rival, Mr. E. Morley. 2. Virgin Queen, Mr. J. Smalley. 3. Eva, Mr. E. Morley. 4. Queen of Whites, Ditto. 5. Seedling, Mr. Smalley. 6. Criterion, Mr. W. Musson. 7. Seedling. 8. Clara, Mr. J. Smalley.

Yellow, or Orange...1. Cox's Defiance, Mr. G. Walker. 2. Argo, C. B. Robinson, Esq. 3. Sulphurea elegans, Mr. J. Smalley. 4. Rival Yellow, Mr. W. Musson. 5. Unique, Mr. J. Smalley. 6. Goldfinder, Mr. G. Walker. 7. Seedling, Mr. E. Morley. 8. Topaz, Mr. J. Mott.

Scarlet...1. Lee's Bloomsbury, C. B. Robinson, Esq. 2. Metella, Mr. G. Walker. 3. King of Scarlets, C. B. Robinson, Esq. 4. Mrs. Milner, Mr. E. Morley. 5. Conqueror, Ditto. 6. Conservative, Mr. Musson. 7. Seedling, Mr. J. Cork. 8. Hylas, Mr. W. Musson.

Rose, or Rose Crimson...1. Grace Darling, C. B. Robinson, Esq. 2. Duchess of Richmond, Mr. E. Morley. 3. Rosa, C. B. Robinson, Esq. 4. Marquis of Lothian, Mr. E. Morley. 5. Hope, Mr. W. Mitchell. 6. Seedling, Ditto. 7. Queen, Mr. Smalley. 8. Countess of Pembroke, C. B. Robinson, Esq.

White Tipped...1. Phenomenon, Mr. E. Morley. 2. Beauty of the Plain, Ditto. 3. Queen of Scots, Mr. W. Musson. 4. Beauty of Kingscote, Mr. G. Walker. 5. Lancashire Witch, C. B. Robinson, Esq. 6. Dodd's Mary, Mr. W. Mitchell. 7. Jeremy Bentham, Mr. J. Mott. 8. Queen of Sarum, Mr. G. Walker.

Lilac...1. Lady Middleton, C. B. Robinson, Esq. 2. Pembroke, Mr. E. Morley. 3. Rosa, C. B. Robinson, Esq. 4. Perfection, Mr. J. Smalley.

First Three Stove Plants...Heydichium Garderianum, Brunsfelsia Americana, and Gloxina Speciosa, Mr. J. Mott.

Second Ditto...Achrosticum Alcicorne, Gloxina Menzesii, and Gloxina Speciosa, Mr. J. Mott.

First Three Greenhouse Plants...Fuchsia Chandlerii, Salvia Patens, and Fuschia Shelthorpii, Mr. J. Mott.

Second Ditto...Dr. Shaw.

Best Twelve Herbaceous...Mr. J. Mott.

Best Twelve Annuals...Ditto.

Best Seedling Dahlia, White, shaded with Lilac...Mr. J. Cork.

September 24. TROWBRIDGE HORTICULTURAL AND FLORICULTURAL SOCIETY. The first Exhibition of the Society took place at the Tontine Inn. Dahlia prizes awarded :—

Best 12 Dahlias...Mr. J. Barratt, for Virgin Queen, Scarlet-le-grand, Mary-words, President of the West, Hero of Seven Oaks, Ellen of Eaton, Beauty of Hyde Vale, Beauty of the Plain, Mackinzie's Perfection, Barratt's Perfection, Climax, Egyptian Prince.

Second best 12...Mr. Williams, Gardener to—Prichard, Esq. for Mackinzie's Perfection, Miss Masters, Virgin Queen, Fireball, Napoleon, Topaz, Glory of Plymouth, Marquis of Lothian, Vandyke, Hope, Miss Johnstone, Springfield Rival.

Third best 12...Mr. J. Barratt, for Danecroft, Eva, Charles the Twelfth, Miller's Charles the Twelfth, Pamplin's Duchess of Kent, Plymouth Rival, Miss Masters, Grand Turk, Lady Dartmouth, Virgin Queen, Columbine, Defiance, Cox.

Best 6...Mr. W. Clarke, for Dodd's Mary, Springfield Rival, Pamplin's Bloomsbury, Argo, Virgin Queen, Hope.

Second best 6...Mr. Williams, for Virgin Queen, Napoleon, Glory of Plymouth, Vandyke, Springfield Rival, Kate Nickleby.

Third best 6...Mr. Wright, for Virgin Queen, Topaz, Rienzi, Springfield Rival, Dodd's Mary, Bowling Green Rival.

Best Scarlet...Mr. Smith.

Best White...Ditto.

Best Lilac...Ditto.

Best Yellow...Mr. W. Clarke.

Best tipped...Ditto.

Best Sulphur...Ditto.

Best Rose...Mr. Rushton.

Best Maroon...Ditto.

Best Bronze...Mr. Smith.

Best Ruby...Ditto.

Best Seedling...Mr. W. M. Roper.

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